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* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	4	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents
NEWS	5	AUG 20	CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS	6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	7	AUG 27	USPATOLD now available on STN
NEWS	8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	10	SEP 13	FORIS renamed to SOFIS
NEWS	11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	12	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS	13	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS	14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	15	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	16	OCT 19	BEILSTEIN updated with new compounds
NEWS	17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS	18	NOV 19	WPIX enhanced with XML display format
NEWS	19	NOV 30	ICSD reloaded with enhancements
NEWS	20	DEC 04	LINPADOCDB now available on STN
NEWS	21	DEC 14	BEILSTEIN pricing structure to change
NEWS	22	DEC 17	USPATOLD added to additional database clusters
NEWS	23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS	24	DEC 17	DGENE now includes more than 10 million sequences
NEWS	25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS	26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS	27	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS	28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD

NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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=> file registry

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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STRUCTURE FILE UPDATES: 2 JAN 2008 HIGHEST RN 959900-89-1
DICTIONARY FILE UPDATES: 2 JAN 2008 HIGHEST RN 959900-89-1

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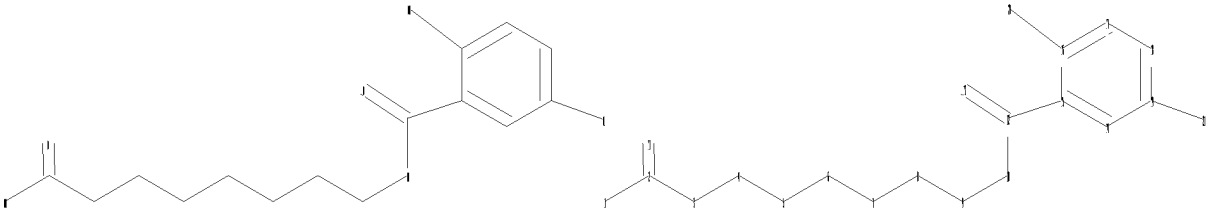
http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10521492.str



chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 20 21
ring nodes :
14 15 16 17 18 19

```
chain bonds :
1-2  2-3  2-11  3-4  4-5  5-6  6-7  7-8  8-9  9-10  10-12  12-13  12-15  16-20
19-21
ring bonds :
14-15  14-19  15-16  16-17  17-18  18-19
exact/norm bonds :
9-10  10-12  12-13  16-20
exact bonds :
2-3  3-4  4-5  5-6  6-7  7-8  8-9  12-15  19-21
normalized bonds :
1-2  2-11  14-15  14-19  15-16  16-17  17-18  18-19


Match level :
1:CLASS  2:CLASS  3:CLASS  4:CLASS  5:CLASS  6:CLASS  7:CLASS  8:CLASS  9:CLASS
10:CLASS  11:CLASS  12:CLASS  13:CLASS  14:Atom  15:Atom  16:Atom  17:Atom  18:Atom
 19:Atom  20:CLASS  21:CLASS



L1      STRUCTURE UPLOADED

=> s l1 fam ful
FULL SEARCH INITIATED 06:53:40 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      150 TO ITERATE

100.0% PROCESSED      150 ITERATIONS                                7 ANSWERS
SEARCH TIME: 00.00.01

L2            7 SEA FAM FUL L1

=> file registry
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      70.11      70.32

FILE 'REGISTRY' ENTERED AT 06:53:43 ON 03 JAN 2008
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DICTIONARY FILE UPDATES:   2 JAN 2008  HIGHEST RN 959900-89-1

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html
```

```
=> file caplus
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   0.46      70.78

FILE 'CAPLUS' ENTERED AT 06:53:46 ON 03 JAN 2008
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FILE COVERS 1907 - 3 Jan 2008  VOL 148 ISS 1
FILE LAST UPDATED: 2 Jan 2008  (20080102/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

=> s l1
   REG1stRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.




SAMPLE SEARCH INITIATED 06:53:47 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       46 TO ITERATE

100.0% PROCESSED       46 ITERATIONS                              0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          514 TO     1326
PROJECTED ANSWERS:               0 TO        0

L3            0 SEA SSS SAM L1



L4           0 L3

=> s l2
L5          33 L2

=> s l5 and platelet
        116723 PLATELET
         57328 PLATELETS
        133517 PLATELET
```

```
                (PLATELET OR PLATELETS)
L6          1 L5 AND PLATELET

=> d l6

L6   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2004:60297  CAPLUS
DN   140:105286
TI   Modified amino acid for the inhibition of platelet aggregation
IN   Bateman, Simon David; Azria, Moise
PA   Novartis AG, Switz.; Novartis Pharma GmbH
SO   PCT Int. Appl., 24 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------    --------
PI   WO 2004006907        A1    20040122    WO 2003-EP7739          20030716
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU,
             LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC,
             SE, SG, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW
         RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,
             DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
             SI, SK, TR, ML, MR, NE, SN, TD, TG
     CA 2492378           A1    20040122    CA 2003-2492378         20030716
     AU 2003257473        A1    20040202    AU 2003-257473          20030716
     BR 2003012712        A     20050426    BR 2003-12712           20030716
     EP 1556027           A1    20050727    EP 2003-763878          20030716
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     CN 1668290           A     20050914    CN 2003-816923          20030716
     JP 2005535670        T     20051124    JP 2004-520655          20030716
     US 2006106110        A1    20060518    US 2005-521492          20050823
PRAI US 2002-396898P      P     20020717
     WO 2003-EP7739       W     20030716
RE.CNT  6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> s l2 and (antithrom? or anticoag? or aggregation or platelet)
            33 L2
         24597 ANTITHROM?
         35982 ANTICOAG?
        116206 AGGREGATION
          2389 AGGREGATIONS
        117765 AGGREGATION
                (AGGREGATION OR AGGREGATIONS)
        116723 PLATELET
         57328 PLATELETS
        133517 PLATELET
                (PLATELET OR PLATELETS)
L7          3 L2 AND (ANTITHROM? OR ANTICOAG? OR AGGREGATION OR PLATELET)

=> d l7 ibib abs 1-3

L7   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2005:1220440  CAPLUS
DOCUMENT NUMBER:         143:483117
TITLE:                   Solid dosage form of wetted heparin
```

INVENTOR(S): Majuru, Shingai; Singh, Brahma; Dhoot, Nikhil
PATENT ASSIGNEE(S): Emisphere Technologies, Inc., USA
SOURCE: PCT Int. Appl., 141 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2005107773	A2	20051117	WO 2005-US16012		20050506
WO 2005107773	A3	20060105			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2005240206	A1	20051117	AU 2005-240206		20050506
CA 2564866	A1	20051117	CA 2005-2564866		20050506
EP 1750729	A2	20070214	EP 2005-744023		20050506
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU					
CN 1964724	A	20070516	CN 2005-80018507		20050506
BR 2005010226	A	20071023	BR 2005-10226		20050506
JP 2007536268	T	20071213	JP 2007-511670		20050506
IN 2006KN03621	A	20070615	IN 2006-KN3621		20061204
KR 2007008720	A	20070117	KR 2006-725727		20061206
NO 2006005636	A	20070130	NO 2006-5636		20061206
US 2007224262	A1	20070927	US 2007-568749		20070112
PRIORITY APPLN. INFO.:			US 2004-569475P	P	20040506
			US 2004-572679P	P	20040519
			US 2004-598978P	P	20040804
			WO 2005-US16012	W	20050506

OTHER SOURCE(S): MARPAT 143:483117

AB The present invention relates to a solid pharmaceutical composition (such as a solid dosage form) comprising a delivery agent and wetted heparin. The inclusion of wetted heparin rather than un-wetted heparin in the solid pharmaceutical composition results in increased delivery of the heparin. Without being bound by any particular theory, applicants believe that because the polymer chain of the wetted heparin is already in an "open" form, while un-wetted heparin is not, less of the wetted heparin is broken down in the gastrointestinal tract and is more readily absorbed in the stomach. Thus, a capsule formulation contained an aminocaprylic acid 229.59, sodium heparin 107.14, PEG 226.13, and Capmul PG8 100.44 mg/capsule.

L7 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:60297 CAPLUS
DOCUMENT NUMBER: 140:105286
TITLE: Modified amino acid for the inhibition of platelet aggregation
INVENTOR(S): Bateman, Simon David; Azria, Moise
PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH

SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004006907	A1	20040122	WO 2003-EP7739	20030716
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SE, SG, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW				
RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, ML, MR, NE, SN, TD, TG				
CA 2492378	A1	20040122	CA 2003-2492378	20030716
AU 2003257473	A1	20040202	AU 2003-257473	20030716
BR 2003012712	A	20050426	BR 2003-12712	20030716
EP 1556027	A1	20050727	EP 2003-763878	20030716
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1668290	A	20050914	CN 2003-816923	20030716
JP 2005535670	T	20051124	JP 2004-520655	20030716
US 2006106110	A1	20060518	US 2005-521492	20050823

PRIORITY APPLN. INFO.: US 2002-396898P P 20020717
WO 2003-EP7739 W 20030716

AB A method of inhibiting blood platelet aggregation in a mammal is provided. The method comprises the administration of a platelet aggregation inhibiting amount of a modified amino acid or pharmaceutically acceptable salt thereof.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:169730 CAPLUS
DOCUMENT NUMBER: 128:248408
TITLE: Synthesis and Evaluation of Compounds That Facilitate the Gastrointestinal Absorption of Heparin
AUTHOR(S): Leone-Bay, Andrea; Paton, Duncan R.; Freeman, John; Lercara, Christine; O'Toole, Doris; Gschneidner, David; Wang, Eric; Harris, Elizabeth; Rosado, Connie; Rivera, Theresa; DeVincent, Aldonna; Tai, Monica; Mercogliano, Frank; Agarwal, Rajesh; Leipold, Harry; Baughman, Robert A.
CORPORATE SOURCE: Emisphere Technologies Inc., Hawthorne, NY, 10532, USA
SOURCE: Journal of Medicinal Chemistry (1998), 41(7), 1163-1171
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A family of aliphatic acid amides (delivery agents) that promote the gastrointestinal absorption of USP heparin in rats and primates has been discovered. The delivery agents in combination with heparin were administered either orally or intracolonically in an aqueous propylene glycol solution and caused dramatic increases in both plasma heparin concns. (anti-Factor Xa) and clotting times (APTT). Using one of the most effective delivery agents in this series, an estimated relative bioavailability of 8% can be achieved following oral administration to

cynomolgus monkeys. To establish a correlation between the in vivo data and an in vitro parameter, immobilized artificial membrane (IAM) chromatog. was performed. Log relative k' values were correlated to the efficiency of oral heparin delivery.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> s "5-ncac" or ncac
       6577572 "5"
            13 "NCAC"
             5 "NCACS"
            18 "NCAC"
                 ("NCAC" OR "NCACS")
             0 "5-NCAC"
                 ("5"(W)"NCAC")
            13 NCAC
             5 NCACS
            18 NCAC
                 (NCAC OR NCACS)
L8          18 "5-NCAC" OR NCAC

=> s l8 and platelet
        116723 PLATELET
         57328 PLATELETS
        133517 PLATELET
                 (PLATELET OR PLATELETS)
L9           0 L8 AND PLATELET

=> s l8 and aggregation
        116206 AGGREGATION
          2389 AGGREGATIONS
        117765 AGGREGATION
                 (AGGREGATION OR AGGREGATIONS)
L10          0 L8 AND AGGREGATION

=> logoff
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:hold
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                               35.94     107.66

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                   ENTRY    SESSION
CA SUBSCRIBER PRICE                               -2.40      -2.40

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 07:00:01 ON 03 JAN 2008

Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:ssptacrs1614

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 07:08:50 ON 03 JAN 2008
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                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      35.94     107.66

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                      -2.40      -2.40

=> file caplus embase biosis medline
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      36.42     108.14

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                      -2.40      -2.40

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FILE 'MEDLINE' ENTERED AT 07:09:07 ON 03 JAN 2008

=> s "5-ncac" or ncac
L11         56 "5-NCAC" OR NCAC

=> s l11 and calcitonin
L12          0 L11 AND CALCITONIN

=> s l11 and platelet
L13          0 L11 AND PLATELET

=> duplicate remove l11
DUPLICATE PREFERENCE IS 'CAPLUS, EMBASE, BIOSIS, MEDLINE'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):y
ENTER FILE NAMES OF DUPLICATES TO KEEP:n
'N' IS NOT VALID.  VALID FILE NAMES ARE 'CAPLUS, EMBASE, BIOSIS, MEDLINE'
You have entered a file name of duplicates to keep that is not
referenced by any of the L#s specified for this DUPLICATE command.
The file names of duplicates that can be kept are listed above.
Please enter one of these file names.
ENTER FILE NAMES OF DUPLICATES TO KEEP:end

=> duplicate remove
ENTER L# LIST OR (END):l11
DUPLICATE PREFERENCE IS 'CAPLUS, EMBASE, BIOSIS, MEDLINE'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L11
L14          36 DUPLICATE REMOVE L11 (20 DUPLICATES REMOVED)

=> d l14 ibib abs 1-36
```

L14 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:1479779 CAPLUS
TITLE: An evolving catalogue of post-AGB and related objects
AUTHOR(S): Szczerba, R.; Siodmiak, N.; Stasinska, G.; Borkowski, J.
CORPORATE SOURCE: N. Copernicus Astronomical Center, Torun, 87-100, Pol.
SOURCE: Astronomical Society of the Pacific Conference Series (2007), 378(Why Galaxies Care about AGB Stars: Their Importance as Actors and Probes), 465-467
CODEN: ASPSFO; ISSN: 1050-3390
PUBLISHER: Astronomical Society of the Pacific
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We have created a catalog containing more than 320 confirmed and about 110 candidate post-AGB stars and related objects. At the same time we have disqualified more than 60 objects which are/were sometimes called "post-AGB.". The online catalog can be reached at http://www.ncac.torun.pl/postagb.

L14 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:479430 CAPLUS
DOCUMENT NUMBER: 147:322318
TITLE: Implementation of a science laboratory safety program in North Carolina schools
AUTHOR(S): Stroud, Linda M.; Stallings, Clara; Korbusieski, Todd J.
CORPORATE SOURCE: Science & Safety Consulting Services, NC, USA
SOURCE: Journal of Chemical Health & Safety (2007), 14(3), 20-30
CODEN: JCHSC2; ISSN: 1871-5532
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB North Carolina is one of the 26 Occupational Safety and Health Administration (OSHA)-approved "State Plan" states, including Puerto Rico and the Virgin Islands [Occupational Safety and Health Administration. Occupational Exposure to Hazardous Chems. in Labs.; 29 CFR Part 1910.1450, 1990]. As a "State Plan" state, North Carolina Occupational Safety and Health (NC OSH) has jurisdiction over all schools - public, charter and private. NC OSH adopted the Lab Standard, 29 CFR 1910.1450 - Occupational Exposures to Hazardous Chems. in Labs. [North Carolina Department of Labor, Division of Occupational Safety and Health. North Carolina Occupational Safety and Health Stds. for General Industry; 29 CFR Part 1910 as adopted in 13 ***NCAC 07F.0101 with amendments through Feb. 1, 2001, 1970]. Statewide, schools have been slow to respond to this regulation even though a Chemical Hygiene Plan (CHP) was required Jan. 31, 1991. The North Carolina State Board of Education (NCSBE) passed State Board Policy HSP-F-017 - Science Laboratory Safety Policy, August 4, 2005, requiring middle/secondary schools to submit their chemical hygiene plans to the NCSBE Office by Jan. 31, 2007.
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2007:463447 BIOSIS
DOCUMENT NUMBER: PREV200700461449
TITLE: Identification of drought tolerant groundnut (Arachis hypogaea L.) genotypes.
AUTHOR(S): Mandavia, Chetana [Reprint Author]; Dhruj, I. U.; Chattrabhuji, B. J.; Rajani, J. C.; Bbarodia, P. S.
CORPORATE SOURCE: Junagadh Agr Univ, Main Oilseeds Res Stn, Junagadh 362001, Gujarat, India

SOURCE: Indian Journal of Agricultural Research, (MAR 2007) Vol. 41, No. 1, pp. 17-22.
CODEN: IJARC2. ISSN: 0367-8245.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 29 Aug 2007
Last Updated on STN: 29 Aug 2007

AB In order to identify groundnut genotypes suited for cultivation under limited rainfall conditions, around 130 genotypes/crosses from different breeding trials were screened for higher yield then local check varieties under simulated drought conditions In summer season for three years i.e. 1995, 1996 and 1997. Total twelve promising crosses/genotypes (the crosses were sixth generation crosses) including three check varieties were selected for study. They were evaluated for pod yield in comparison with three check varieties in kharif seasons of the years 1999, 2000 and 2001 at four naturally drought prone locations in addition to Junagadh. The crosses GG-2 X NCAC 17135, GG-2 x PI 259747, J-11 x PI 259747 and S 206 x FESR-8, kisan x FESR-S-PI-B1-B and the genotypes JB 223 and 224 recorded consistently superior and stable yield for the three years at all the locations. Hence, it is suggested that these lines/genotypes could be grown under regions of limited rainfall. These lines may be used as parents in breeding programmes for developing drought tolerant groundnut cultivars.

L14 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2007:72046 CAPLUS
DOCUMENT NUMBER: 147:113229
TITLE: Candida species adhesion to oral epithelium: factors involved and experimental methodology used
AUTHOR(S): Henriques, Mariana; Azeredo, Joana; Oliveira, Rosario
CORPORATE SOURCE: Centre of Biological Engineering, University of Minho, Braga, Port.
SOURCE: Critical Reviews in Microbiology (2006), 32(4), 217-226
CODEN: CRVMAC; ISSN: 1040-841X
PUBLISHER: Informa Healthcare
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Due to the increasing prevalence and emergence of Non-Candida albicans Candida (NCAC) species, especially in immunosuppressed patients, it is becoming urgent to deepen the current knowledge about virulence factors of these species. Adhesion of cells to epithelium is considered one of the major virulence factors of Candida species. However, relatively little is known concerning the adhesion mechanisms of NCAC species to epithelium, as well as about the factors affecting the adhesion process. This review focuses both the mechanisms that regulate the adhesion interactions and the factors involved and the description of the exptl. methodol. that has been used to perform the adhesion assays.

REFERENCE COUNT: 126 THERE ARE 126 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:646352 CAPLUS
DOCUMENT NUMBER: 143:193601
TITLE: The planar equilibrium conformation of N,N-dimethylcarbamoyl chloride according to the electron diffraction, quantum chemistry, and vibrational spectroscopy data
AUTHOR(S): Khaikin, L. S.; Grikina, O. E.; Kovacs, A.; Vilkov, L. V.

CORPORATE SOURCE: Faculty of Chemistry, Moscow State University, Moscow, 119899, Russia
SOURCE: Russian Journal of Physical Chemistry (2005), 79(7), 1115-1120
CODEN: RJPCAR; ISSN: 0036-0244
PUBLISHER: Pleiades Publishing, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The structure of the Me2NCClO mol. was determined by electron diffraction using the dynamic model of wagging-inversion amino group motion. In conformity with quantum-chemical calcns. in the MP2(full)/6-311G(3df,2p) approximation, the exptl. data were analyzed on the assumption of Cs symmetry with a planar frame of heavy atoms in the equilibrium conformation. The dynamic model of structural anal. was based on the quantum-chemical potential function for wagging-inversion motion constructed with geometry optimization at the MP2(full)/6-311G(3df,2p) level. The harmonic (h1) and anharmonic (anh1) vibrational characteristics, including the mean amplitudes uh1 and corrections to internuclear distances for the shrinkage effect δvibh1 and δvibanh1, were calculated using first-order perturbation theory and a scaled quantum-chemical quadratic force field. The main geometric parameters of the rh1 structure (bond lengths in Å and angles in degrees) were C=O 1.202(3), NCAc 1.351(3), NCtransMe 1.461(3), NCcisMe 1.461(3), CAcCl 1.793(4), CAcNCtransMe 126.0(3), CAcNCcisMe 117.1(2), CMeNCMe 116.9(3), NC=O 127.2(1), NCCl 113.0(2), and OCCl 119.7(2). The replacement of the acyl H atom with chlorine in the simplest amides was shown to shorten both peptide fragment bonds (NCAc and C=O) by 0.01-0.02 Å. The CCl bond was elongated compared with the Me chloride mol.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:257487 BIOSIS
DOCUMENT NUMBER: PREV200510047177
TITLE: Detached leaf assay to screen for host plant resistance to Helicoverpa armigera.
AUTHOR(S): Sharma, Hari C. [Reprint Author]; Pampapathy, G.; Dhillon, Mukesh K.; Ridsdill-Smith, James T.
CORPORATE SOURCE: Int Crops Res Inst Semi Arid Trop, Patancheru 502324, Andhra Pradesh, India
h.sharma@cgiar.org
SOURCE: Journal of Economic Entomology, (APR 2005) Vol. 98, No. 2, pp. 568-576.
CODEN: JEENAI. ISSN: 0022-0493.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 14 Jul 2005
Last Updated on STN: 14 Jul 2005

AB The noctuid Helicoverpa armigera (Hubner) is a major insect pest of chickpea Cicer arietinum L., pigeonpea Cajanus cajan (L.) Millsp., peanut Arachis hypogaea L., and cotton Gossypium spp., and host plant resistance is an important component for managing this pest in different crops. Because of variations in insect density and staggered flowering of the test material, it is difficult to identify cultivars with stable resistance to H. armigera across seasons and locations. To overcome these problems, we standardized the detached leaf assay to screen for resistance to this pest in chickpea, pigeonpea, peanut, and cotton under uniform insect pressure under laboratory conditions. Terminal branch (three to four fully expanded leaves) of chickpea, first fully expanded leaf of cotton, trifoliate of pigeonpea, or quadrifoliate of peanut, embedded in 3% agar-agar in a plastic cup/jar of appropriate size (250-500-ml

capacity) infested with 10-20 neonate larvae can be used to screen for resistance to H. armigera. This technique keeps the leaves in a turgid condition for approximate to 1 wk. The experiments can be terminated when the larvae have caused > 80% leaf damage in the susceptible check or when differences in leaf feeding between the resistant and susceptible checks are maximum. Detached leaf assay can be used as a rapid screening technique to evaluate germplasm, segregating breeding materials, and mapping populations for resistance to H. armigera in a short span of time with minimal cost, and under uniform insect infestation. It also provides useful information on antibiosis component of resistance to the target insect pest.

L14 ANSWER 7 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
DUPLICATE 2
ACCESSION NUMBER: 2005:515380 BIOSIS
DOCUMENT NUMBER: PREV200510306431
TITLE: A questionnaire survey of diet and diet-related foods by NCAC.
AUTHOR(S): Itakura, Yukako [Reprint Author]
CORPORATE SOURCE: Natl Consumer Affairs Ctr Japan, Informat Anal Dept, Minato Ku, 3-13-22 Takanawa, Tokyo 1088602, Japan
SOURCE: Shokuhin Eiseigaku Zasshi, (AUG 2005) Vol. 46, No. 4, pp. J240-J242.
CODEN: SKEZAP. ISSN: 0015-6426.
DOCUMENT TYPE: Article
LANGUAGE: Japanese
ENTRY DATE: Entered STN: 23 Nov 2005
Last Updated on STN: 23 Nov 2005

L14 ANSWER 8 OF 36 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2005429603 EMBASE
TITLE: A questionnaire survey of diet and diet-related foods by NCAC.
AUTHOR: Itakura Y.
CORPORATE SOURCE: Y. Itakura, National Consumer Affairs Center of Japan, Information Analysis Dept., 3-13-22, Takanawa, Minato-ku, Tokyo 108-8602, Japan
SOURCE: Journal of the Food Hygienic Society of Japan, (Aug 2005) Vol. 46, No. 4, pp. J-240-J-242.
Refs: 2
ISSN: 0015-6426 CODEN: SKEZAP
COUNTRY: Japan
DOCUMENT TYPE: Journal; General Review; (Review)
FILE SEGMENT: 017 Public Health, Social Medicine and Epidemiology
LANGUAGE: Japanese
ENTRY DATE: Entered STN: 27 Oct 2005
Last Updated on STN: 27 Oct 2005

L14 ANSWER 9 OF 36 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN DUPLICATE 3
ACCESSION NUMBER: 2003359663 EMBASE
TITLE: Nerve compound action current (NCAC) measurements and morphometric analysis in the proximal segment after nerve transection and repair in a rabbit model.
AUTHOR: Walbeehm E.T.; Dudok Van Heel E.B.M.; Kuypers P.D.L.; Terenghi G.; Hovius S.E.R.
CORPORATE SOURCE: Dr. E.T. Walbeehm, Department of Plastic Surgery, Erasmus MC, Dr Morewaterplein 50, 3000 DR Rotterdam, Netherlands. erikwarbeehm@mac.com
SOURCE: Journal of the Peripheral Nervous System, (Jun 2003) Vol. 8, No. 2, pp. 108-115.

Refs: 28
ISSN: 1085-9489 CODEN: JPNSFO
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
008 Neurology and Neurosurgery
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 18 Sep 2003
Last Updated on STN: 18 Sep 2003

AB In the evaluation of nerve regeneration using magneto-neurography (MNG), the proximal segment showed a reproducible decrease in peak-peak amplitude of the nerve compound action current's (NCAC) of 60%. To explain these changes, morphometry of myelinated axons in the proximal segment is compared to the MNG signals. A standardised nerve transection and reconstruction was performed in rabbits. NCACs were measured approximately 5 cm proximal to the lesion from operated and control nerves after 12 weeks. Histological samples were taken from the same area of the nerve where the NCACs were obtained. Results showed a decrease of the peak-peak amplitude of the NCAC of 57% compared to the control. Conduction velocity decreased 15% (not significant). Morphometry elicited a decrease in larger (10-15 μm) axons (284±134 vs 82±55) and an increase in smaller (2-5 μm) axons (1445±360 vs 1921±393). A strong correlation existed between the decrease in amplitude and the decrease in larger axons (0.85). Peak-peak amplitude varies approximately with the square of the diameter axon. Therefore, because peak-peak amplitude is mainly dependent on the larger-diameter axons, the decrease in peak-peak amplitude of the NCACs may be explained by a decrease in numbers of 10-15-μm axons.

L14 ANSWER 10 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:370092 BIOSIS
DOCUMENT NUMBER: PREV200100370092
TITLE: PBS 29017: A high yielding large seeded groundnut culture.
AUTHOR(S): Bandyopadhyay, A. [Reprint author]; Manivel, P. [Reprint author]; Mathur, R. K. [Reprint author]
CORPORATE SOURCE: National Research Centre for Groundnut, ICAR, Ivanagar Road, Junagadh, 362 001, India
SOURCE: Indian Journal of Genetics and Plant Breeding, (May, 2001) Vol. 61, No. 2, pp. 197-198. print.
CODEN: IJGBAG. ISSN: 0019-5200.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 8 Aug 2001
Last Updated on STN: 19 Feb 2002

L14 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2000:396191 CAPLUS
DOCUMENT NUMBER: 133:197895
TITLE: Laser-induced dispersed fluorescence detection of polycyclic aromatic compounds in soil extracts separated by capillary electrochromatography
AUTHOR(S): Garguilo, M. G.; Thomas, D. H.; Anex, D. S.; Rakestraw, D. J.
CORPORATE SOURCE: Sandia National Laboratories, Livermore, CA, 94451-0969, USA
SOURCE: Journal of Chromatography, A (2000), 883(1+2), 231-248
CODEN: JCRAEY; ISSN: 0021-9673
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Polycyclic aromatic hydrocarbons (PAHs) and nitrogen-containing aromatic compds. (
NCACs) are characterized in soil exts. and laboratory stds. by capillary electrochromatog. (CEC) with laser-induced dispersed fluorescence (LIDF) detection using a liquid-nitrogen cooled charge-coupled device detector. The LIDF detection technique provides information on compound identity and, when coupled with the high separation efficiencies of the CEC technique, proves useful in the anal. of complex mixts. Differences in fluorescence spectra also provide a means of identifying co-eluting compds. by using deconvolution algorithms. Detection limits range from 0.5 to 96 + 10-10M for selected PAHs and 0.9-3.7 + 10-10M for selected NCACs. Soil exts. are also injected onto the CEC column to evaluate chromatog. method performance with respect to complex samples and the ability to withstand exposure to environmental samples.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 12 OF 36 EMBASE DUPLICATE 5

ACCESSION NUMBER: 1999269208 EMBASE

TITLE: Changes in the compound action current amplitudes in relation to the conduction velocity and functional recovery in the reconstructed peripheral nerve.

AUTHOR: Kuypers P.D.L.; Walbeehm E.T.; Dudok V. Heel M.; Godschalk M.; Hovius S.E.R.

CORPORATE SOURCE: Dr. P.D.L. Kuypers, Dept. of Plastic/Reconstr. Surgery, Erasmus University Rotterdam, Faculty of Medicine, P.O. Box 1738, 3000 DR Rotterdam, Netherlands

SOURCE: Muscle and Nerve, (Aug 1999) Vol. 22, No. 8, pp. 1087-1093. Refs: 32
ISSN: 0148-639X CODEN: MUNEDE

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
008 Neurology and Neurosurgery

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 12 Aug 1999
Last Updated on STN: 12 Aug 1999

AB The average axon diameter in the proximal segment of a transected and reconstructed peripheral nerve will decrease shortly after the transection and increase again when the regenerating axons make contact with their targets. The magnetically recorded nerve compound action current (NCAC) amplitude and the conduction velocity (CV) are directly related to the axon diameters. In this experiment, the peroneal nerve was unilaterally transected and reconstructed in 42 rabbits. After 3, 4.5, 6, 8, 12, 20, and 36 weeks of regeneration time, hind leg motor function recovery, NCAC amplitude, and CV(1st peak) were studied. Our results demonstrate a significant decrease in signal amplitude and CV in the first 8 weeks after reconstruction. These decreases are related ($P < 0.05$). After 8 weeks of regeneration time, motor function and the CV of the recorded signals start to recover, but the signal amplitudes do not. Based on the correlation of the CV and signal amplitude with axon diameter, they would both be expected to increase with recovering function. As an explanation for this lack of increase of signal amplitude, we suggest that, at the same time as some axons reach their target organs and start to mature, a number of the axons which have not reached a proper target organ will lose their signal-conducting capability. This will cause a decrease in compound signal amplitude, which cancels out the expected increase in NCAC amplitude, due

to axonal maturation.

L14 ANSWER 13 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:446847 BIOSIS
DOCUMENT NUMBER: PREV200000446847
TITLE: Ground arthropod attacks on groundnut Arachis hypogaea L in Burkina Faso.
AUTHOR(S): Dicko, I. O. [Reprint author]; Troaore, S.; Traore, D.; Dao, B. [Reprint author]
CORPORATE SOURCE: Universite de Ouagadougou, Ouagadougou, Burkina-Faso
SOURCE: Tropicultura, (Dec., 1998-1999) Vol. 16-17, No. 1, pp. 43-46. print.
ISSN: 0771-3312.
DOCUMENT TYPE: Article
LANGUAGE: French
ENTRY DATE: Entered STN: 18 Oct 2000
Last Updated on STN: 10 Jan 2002
AB Studies were conducted in five districts of Burkina Faso, West Africa from November to December, 1996. The objectives aimed at establishing spatial distribution and quantifying the level of damages on peanut pods by soil arthropods, termites and millepedes. Twenty seven samples of 100 pods each were taken from farmers' stocks in each district, which made a total of 135 pod samples examined. Damage was determined in each district by counting scarified pods by termites and perforated pods by millepedes and converting obtained numbers in percents. Results show that termites and millepedes cause damages throughout the five districts, with termites causing damages, as high as 30-40% in some districts, compared to damages caused by millepedes which rarely exceeded 3%. While damage degrees by termites were found to vary with districts, distribution of millepede damages was fairly uniform throughout the study area. The observed differential distribution of termite damages is thought to be due to farmers growing susceptible varieties in eastern districts, varieties such as Te3, proven to be highly susceptible to termites. Neither peanut pod weight, nor grain weight was significantly correlated with damages by termites and millepedes. However, it is highly likely that damages by the two soil arthropods increase grain contamination by the known carcinogenic substance, aflatoxin, by allowing pod penetration and grain invasion by the aflatoxin-producing fungus, Aspergillus sp. This suggests that there is an urgent need for efficient control methods to be developed and applied, not only to reduce peanut yield loss, but also to help preserve human health. One of these methods could be the use by local farmers of resistant varieties which have been shown by several authors to be efficient against termites and millepedes. Such varieties include Ncac 2243 and Ncac 343.

L14 ANSWER 14 OF 36 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN DUPLICATE 6
ACCESSION NUMBER: 1998181473 EMBASE
TITLE: A magnetic evaluation of peripheral nerve regeneration: II. The signal amplitude in the distal segment in relation to functional recovery.
AUTHOR: Kuypers P.D.L.; Van Egeraat J.M.; Van Briemen L.J.; Godschalk M.; Hovius S.E.R.
CORPORATE SOURCE: Dr. P.D.L. Kuypers, Dept. of Plastic/Reconstr. Surgery, Erasmus University Rotterdam, Faculty of Medicine, P.O. Box 1738, 3000 DR Rotterdam, Netherlands
SOURCE: Muscle and Nerve, (1998) Vol. 21, No. 6, pp. 750-755.
Refs: 12
ISSN: 0148-639X CODEN: MUNEDE
COUNTRY: United States
DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 021 Developmental Biology and Teratology
008 Neurology and Neurosurgery
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 2 Jul 1998
Last Updated on STN: 2 Jul 1998

AB Motor and sensory function in a healthy nerve is strongly related to the number of neuronal units connecting to the distal target organs. In the regenerating nerve the amplitudes of magnetically recorded nerve compound action currents (NCACs) seem to relate to the number of functional neuronal units with larger diameters regenerating across the lesion. The goal of this experiment was to compare the signal amplitudes recorded from the distal segment of a reconstructed nerve to functional recovery. To this end, the peroneal nerves of 30 rabbits were unilaterally transected and reconstructed. After 6, 8, 12, 20, and 36 weeks of regeneration time the functional recovery was studied based on the toe-spread test, and the nerve regeneration based on the magnetically recorded NCACs. The results demonstrate that the signal amplitudes recorded magnetically from the reconstructed nerves increase in the first 12 weeks from 0% to 21% of the amplitudes recorded from the control nerves and from 21% to 25% in the following 23 weeks. The functional recovery increases from absent to good between the 8th and the 20th week after the reconstruction. A statistically significant relation was demonstrated between the signal amplitude and the functional recovery ($P < 0.001$). It is concluded that the magnetic recording technique can be used to evaluate the quality of a peripheral nerve reconstruction and seems to be able to predict, shortly after the reconstruction, the eventual functional recovery.

L14 ANSWER 15 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1999:100608 BIOSIS
DOCUMENT NUMBER: PREV199900100608
TITLE: Testa colour inheritance in groundnut (Arachis hypogaea L.).
AUTHOR(S): Vasanthi, R. P. [Reprint author]
CORPORATE SOURCE: Regional Agric. Res. Stn., Tirupati 517 502, India
SOURCE: Indian Journal of Genetics and Plant Breeding, (Nov., 1998) Vol. 58, No. 4, pp. 433-437. print.
CODEN: IJGBAG. ISSN: 0019-5200.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 4 Mar 1999
Last Updated on STN: 4 Mar 1999

AB Inheritance of testa colour was studied in six crosses of groundnut namely Tirupati - 1 (rose) X ICCV 86699 (red), JL-24 (rose) X ICCV 86699 (red), TCGS-37 (red) X ICCV 86699 (red), Tirupati - 1 (rose) X NcAc 343 (rose), JL-24 (rose) X NcAc 343 (rose) and TCCS-37 (red) X NcAc 343 (rose) and TCGS-37 (red) X NcAc 343 (rose). F2 segregation gave an acceptable fit to a phenotypic ratio of 12 rose : 3 red : I light tan in former two crosses which shows epistatic interaction between two loci. In the cross, TCGS-37 (red) X ICGV 86699 (red), F2 segregation fitted well to an expected phenotypic ratio of 51 red: 12 rose : 1 light fan. This indicates the involvement of two gene loci for red testa interacting with rose testa colour locus in epistatic fashion. F2 segregation ratios in crosses Tirupati-1 (rose) X NcAc 343 (rose) and JL-24 (rose) X NcAc 343 (rose) fitted well to an expected phenotypic ratio of 60 rose: 3 red: 1 white indicating trigenic inheritance with two epistatic gene loci governing rose testa interacting with one red test acolour locus that is hypostatic to both the rose testa loci. The segregation pattern in cross TCGS-37 (red) X NcAc 343 (rose) showed tetragenic inheritance with duplicate loci for rose as well

as red testa colours interacting in epistatic manner. This needs to be confirmed further through F3 studies.

L14 ANSWER 16 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:518537 BIOSIS
DOCUMENT NUMBER: PREV199699240893
TITLE: Stability analysis of multilines and their components in groundnut.
AUTHOR(S): Singh, Mohinder; Sohu, Harpreet Kaur
CORPORATE SOURCE: Dep. Plant Breeding, Punjab Agric. University, Ludhiana 141 004, India
SOURCE: Crop Improvement, (1995) Vol. 22, No. 1, pp. 87-90. ISSN: 0256-0933.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 22 Nov 1996
Last Updated on STN: 22 Nov 1996
AB The stability of two groundnut multilines along with their four respective component lines with two checks were determined over 12 unilocation environments during Kharif 1992. Each multiline was constructed from a different cross (multiline 1 from M 145 x NcAc 1107 and multiline 2 from M 37 x Nc Ac 1107) in F-a by compositing equal proportions of seed from four phenotypically similar sib lines. The GxE interaction was highly significant for pod yield. The multilines were stable across environments but some component lines (pure lines) were superior in pod yield and were also as stable as the multilines themselves.

L14 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 7
ACCESSION NUMBER: 1995:299686 CAPLUS
DOCUMENT NUMBER: 122:63800
TITLE: Identification of potential fish carcinogens in sediment from Hamilton Harbor, Ontario, Canada
AUTHOR(S): Balch, G. C.; Metcalfe, C. D.; Huestis, S. Y.
CORPORATE SOURCE: Environmental Resource Studies, Trent Univ., Peterborough, ON, K9J 7B8, Can.
SOURCE: Environmental Toxicology and Chemistry (1995), 14(1), 79-91
CODEN: ETOCDK; ISSN: 0730-7268
PUBLISHER: SETAC Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A carcinogenicity- and mutagenicity-directed fractionation approach was used to identify the carcinogenic compds. in contaminated sediments that are putatively responsible for the high prevalence of tumors in bottom-dwelling fish from Hamilton Harbor, Ontario. Mutagenic activity was detected with Ames tester strains (TA98, TA100) in relatively nonpolar fractions of sediment extract containing PAHs and N-containing aromatic compds. (
NCACs). These fractions were also carcinogenic in an in vivo carcinogenicity bioassay with rainbow trout (Oncorhynchus mykiss). When a more polar extract fraction was tested for mutagenicity and carcinogenicity, weak mutagenic activity was detected with an O-acetyltransferase-enriched Ames tester strain (YG1024), and weak carcinogenic activity was detected in the rainbow trout assay. Data indicate that PAHs in contaminated Hamilton Harbor sediments are potent fish carcinogens, but it is also evident that other organic compds. in the sediment, such as NCACs and nitroarenes, may contribute to carcinogenicity.

L14 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:662323 CAPLUS

DOCUMENT NUMBER: 121:262323
TITLE: Air quality compliance at a wastewater sludge incinerator facility
AUTHOR(S): Van Durme, Gayle P.; Murdock, John C.; Talmage, Gary R.
CORPORATE SOURCE: Black and Veatch, Kansas City, MO, USA
SOURCE: Proceedings, Annual Meeting - Air & Waste Management Association (1993), 86TH(VOL. 5), 93WP72B.05, 15pp
CODEN: PAMEE5; ISSN: 1052-6102
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Stack gas sampling and air pollution modeling at the Rocky River Wastewater Treatment Plant near Concord, North Carolina, to determine whether the sludge incinerator and the whole wastewater treatment facility would be in compliance with regulations for metal and organic emissions indicated, i.a, that an afterburner is needed to meet the Part 503 limit on total hydrocarbon emissions.; for better dispersion, the existing rooftop stack was replaced with a 42.7-m stack and the existing scrubber was upgraded for better particulate control. All of the NCAC (North Carolina Administrative Code)-listed metal emissions except nickel were above "de minimis" levels, requiring dispersion modeling to to show that health risk-based AAl's (acceptable ambient levels) were not exceeded; such modeling showed that the levels were below the AAl's. Hydrogen sulfide emissions were predicted to be below "de minimis" after a minor operational change. The wastewater is relatively free of priority pollutants.

L14 ANSWER 19 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1993:136364 BIOSIS
DOCUMENT NUMBER: PREV199395069164
TITLE: Genotype x environment interaction in bunch-erect group of groundnut (Arachis hypogaea).
AUTHOR(S): Raut, S. S.; Jamadagni, B. M.
CORPORATE SOURCE: Dep. Agric. Botany, Konkan Krishi Vidyapeeth, Dapoli, Maharashtra 415 712, india
SOURCE: Indian Journal of Agricultural Sciences, (1993) Vol. 63, No. 1, pp. 23-26.
CODEN: IJASA3. ISSN: 0019-5022.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Mar 1993
Last Updated on STN: 16 Mar 1993

AB An experiment was conducted during winter (rabi)-summer seasons of 1987-88, 1988-89 and rainy season of 1988 to study the stability of kernel yield and its related characters in 5 genotypes ('JL24', 'SB11', 'TG 19A', 'NCAC 589' and 'PI 270792') of groundnut (Arachis hypogaea L.). Environment + (genotype &X environment) was significant for pod yield, oil content, duration for flowering, and the height and spread of the plant. The 100-kernel weight, harvest index, shelling (%) and maturity period showed the presence of merely environment (linear) components. 'TG 19A' showed the highest kernel weight (14.35 g) and absence of genotype x environment interaction for kernel yield. 'NCAC 589' proved promising for intensive cultivation owing to its predictable high performance for kernel yield (bi = 2.85) and the related characters and for non-fluctuating maturity period.

L14 ANSWER 20 OF 36 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN DUPLICATE 8
ACCESSION NUMBER: 1992023900 EMBASE
TITLE: In vivo magnetic and electric recordings from nerve bundles and single motor units in mammalian skeletal muscle:

Correlations with muscle force.
AUTHOR: Gielen F.L.H.; Friedman R.N.; Wikswo Jr. J.P.
CORPORATE SOURCE: Department of Physics and Astronomy, Vanderbilt University, Box 1807 Station B, Nashville, TN 37235, United States
SOURCE: Journal of General Physiology, (1991) Vol. 98, No. 5, pp. 1043-1061.
ISSN: 0022-1295 CODEN: JGPLAD
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20 Mar 1992
Last Updated on STN: 20 Mar 1992

AB Recent advances in the technology of recording magnetic fields associated with electric current flow in biological tissues have provided a means of examining action currents that is more direct and possibly more accurate than conventional electrical recording. Magnetic recordings are relatively insensitive to muscle movement, and, because the recording probes are not directly connected to the tissue, distortions of the data due to changes in the electrochemical interface between the probes and the tissue are eliminated. In vivo magnetic recordings of action currents of rat common peroneal nerve and extensor digitorum longus (EDL) muscle were obtained by a new magnetic probe and amplifier system that operates within the physiological temperature range. The magnetically recorded waveforms were compared with those obtained simultaneously by conventional, extracellular recording techniques. We used the amplitude of EDL twitch force (an index of stimulus strength) generated in response to graded stimulation of the common peroneal nerve to enable us to compare the amplitudes of magnetically recorded nerve and muscle compound action currents (NCACs and MCACs, respectively) with the amplitudes of electrically recorded nerve compound action potentials (NCAPs). High, positive correlations to stimulus strength were found for NCACs ($r = 0.998$), MCACs ($r = 0.974$), and NCAPs ($r = 0.998$). We also computed the correlations of EDL single motor unit twitch force with magnetically recorded single motor unit compound action currents (SMUCACs) and electrically recorded single motor unit compound action potentials (SMUCAPs) obtained with both a ring electrode and a straight wire serving as a point electrode. Only the SMUCACs had a relatively strong positive correlation ($r = 0.768$) with EDL twitch force. Correlations for ring and wire electrode-recorded SMUCAPs were 0.565 and -0.366, respectively. This study adds a relatively direct examination of action currents to the characterization of the normal biophysical properties of peripheral nerve, muscle, and muscle single motor units.

L14 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 9
ACCESSION NUMBER: 1991:655038 CAPLUS
DOCUMENT NUMBER: 115:255038
TITLE: Characterization of nitrogen-containing aromatic compounds in soil and sediment by capillary gas chromatography-mass spectrometry after fractionation
AUTHOR(S): Brumley, William C.; Brownrigg, Cynthia M.; Brilis, George M.
CORPORATE SOURCE: Environ. Monit. Syst. Lab., US Environ. Prot. Agency, Las Vegas, NV, 89193-3478, USA
SOURCE: Journal of Chromatography (1991), 558(1), 223-33
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nitrogen-containing aromatic compds. (NCACs) are characterized in soil and sediment by full-scan capillary gas chromatog.-mass spectrometry (GC-MS) under electron ionization. The approach makes use of

fractionation of methylene chloride exts. based first on partitioning of the basic compds. into acid. The neutral NCACs are then separated from the bulk of the polynuclear aromatic hydrocarbons by preparative TLC with methylene chloride-hexane (30:70) as developing solvent. NCACs can then be determined using deuterated internal stds. to 100 μg/kg or below. GC was on a DB-5 column with a flow rate of He of 38 cm/s at 60°; an SPB-5 Supelco column was used for GC-MS. Examples of detns. in sediment and creosote-contaminated soil are given. Recoveries range 50-90%. An advantage of the 2-step fractionation scheme is the chemical separation of azaarenes and cyanoazaarenes of the same elemental composition which facilitates identification of compound class and simplifies chromatog. sepns.

L14 ANSWER 22 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1992:431372 BIOSIS
DOCUMENT NUMBER: PREV199294083497; BA94:83497
TITLE: VARIETAL SUSCEPTIBILITY OF DORYLUS-ORIENTALIS WESTWOOD HYMENOPTERA FORMICIDAE IN GROUNDNUT VARIETIES.
AUTHOR(S): MAHTO Y [Reprint author]
CORPORATE SOURCE: DIV ENTOMOL, INDIAN AGRIC RES INST, NEW DELHI 110012, INDIA
SOURCE: Journal of Entomological Research (New Delhi), (1991) Vol. 15, No. 2, pp. 144-148.
CODEN: JEREDP. ISSN: 0378-9519.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 22 Sep 1992
Last Updated on STN: 22 Sep 1992

AB Varietal susceptibility of sixty-three varieties of groundnut to Dorylus orientalis Westwood was studied during 1989. It caused damage up to 52.0% to pods of variety Ah-7903 under the ground. The damage hole usually made at the anterior end of the pod was very characteristic. The insect came out of the pod through this hole in herds when pods were spread and exposed to sun. Groundnut varieties, viz. VR-3317, U/4/4/38, NS-78, and NCAC-17840 revealed no damage of pods by this army ant.

L14 ANSWER 23 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1991:40885 BIOSIS
DOCUMENT NUMBER: PREV199140017865; BR40:17865
TITLE: TOXICITY OF NITROGEN-CONTAINING AROMATIC COMPOUNDS NCACS QUINOLINE AND 4 AZAFLUORENE BEHAVIOR IN AN ESCHERICHIA-COLI TEST SYSTEM EVIDENCE OF MEMBRANE EFFECTS.
AUTHOR(S): CATALLO W J III [Reprint author]; CLELAND D R; BENDER M E
CORPORATE SOURCE: INST ENVIRON STUDIES, LOUISIANA STATE UNIV, BATON ROUGE, LA 70803, USA
SOURCE: (1990) pp. 199-221. LANDIS, W. G. AND W. H. VAN DER SCHALIE (ED.). ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS) STP (SPECIAL TECHNICAL PUBLICATIONS), 1096. AQUATIC TOXICOLOGY AND RISK ASSESSMENT; 13TH SYMPOSIUM, ATLANTA, GEORGIA, USA, APRIL 16-18, 1989. VII+378P. ASTM: PHILADELPHIA, PENNSYLVANIA, USA. ILLUS. MAPS.
ISBN: 0-8031-1460-5.
DOCUMENT TYPE: Book
Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 5 Jan 1991
Last Updated on STN: 30 Jan 1991

L14 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:443718 CAPLUS
DOCUMENT NUMBER: 115:43718
TITLE: Toxicity of nitrogen-containing aromatic compounds (NCACs): quinoline and 4-azafluorene behavior in an Escherichia coli test system - evidence of membrane effects
AUTHOR(S): Catallo, W. James, III; Cleland, David R.; Bender, Michael E.
CORPORATE SOURCE: Virginia Inst. Mar. Sci., Coll. William and Mary, Gloucester Point, VA, 23062, USA
SOURCE: ASTM Special Technical Publication (1990), 1096(Aquat. Toxicol. Risk Assess.: 13th Vol.), 199-221
CODEN: ASTTA8; ISSN: 0066-0558
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This research addressed the effects of two prominent nitrogen-containing aromatic compds. (NCACs), quinoline and 4-azafluorene, on respiratory electron transport (ET) in E. coli. ET was estimated spectrophotometrically using reduction rates of iodonitrotetrazolium chloride (INT), which is reduced in vivo to a red colored formazan (INTF). It was noted that both NCACs gave anomalous dose-response behavior in INT assays: in a defined threshold dose range, INT reduction rates near or above the controls were observed Compared with controls and low doses, the threshold doses for the NCACs showed different INT reduction kinetics, decreased cellular oxygen consumption, and decreased viable cell densities. These observations and expts. with E. coli spheroplast prepns., gram pos. cells, and deep rough mutants supported the hypothesis that the NCACs caused removal of outer membrane constituents and probably interference with cell membrane function. Data from the NT bioassays, comparative oxygen demand studies, assays of INT response in bacteria with different outer membrane characteristics, and transmission electron microscopy are presented in support of this hypothesis.

L14 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:213794 CAPLUS
DOCUMENT NUMBER: 112:213794
TITLE: Effects of selected nitrogen-containing aromatic compounds (NCACs) on physiological properties in Escherichia coli
AUTHOR(S): Catallo, William James, III
CORPORATE SOURCE: Coll. William and Mary, Williamsburg, VA, USA
SOURCE: (1989) 182 pp. Avail.: Univ. Microfilms Int., Order No. DA9004164
From: Diss. Abstr. Int. B 1990, 50(9), 3895
DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable

L14 ANSWER 26 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1990:74308 BIOSIS
DOCUMENT NUMBER: PREV199089042134; BA89:42134
TITLE: PATHOGENICITY AND SCREENING OF GROUNDNUT CULTIVARS AGAINST MELOIDOGYNE-ARENARIA.
AUTHOR(S): PRASAD D [Reprint author]
CORPORATE SOURCE: DIV NEMATOL, INDIAN AGRIC RES INST, NEW DELHI-110 012, INDIA
SOURCE: Pakistan Journal of Nematology, (1989) Vol. 7, No. 2, pp. 97-102.
ISSN: 0255-7576.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 23 Jan 1990
Last Updated on STN: 23 Jan 1990

AB One week old seedlings of three groundnut cultivars PG-1, M-13 and J-11 inoculated with different levels of Meloidogyne arenaria showed that the growth of plants was adversely affected with increasing nematode inoculum, whereas in M-13 and PG-1 the reduction was not statistically significant. In J-11, 2 larvae per g of soil was the damaging threshold level, but the nematode reproduction was limited. Rate of nematode multiplication was maximum in PG-1 at the lowest inoculum level. At highest level of inoculation, the population just maintained itself in two cultivars and was less than the initial population in J-11. Out of 500 varieties tested, C-41 (NRCG-31), NCAC-2196 (NRCG-1010), Local 256 and Japtin-220-15 exhibited a resistant reaction against root-knot nematode, M. arenaria.

L14 ANSWER 27 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1987:184976 BIOSIS
DOCUMENT NUMBER: PREV198783093100; BA83:93100
TITLE: COMBINING ABILITY FOR YIELD AND ITS COMPONENTS IN A DIALLEL CROSS OF GROUNDNUT.
AUTHOR(S): BASU M S [Reprint author]; VADDORIA M A; SINGH N P; REDDY P S
CORPORATE SOURCE: NATL RES CENT GROUNDNUT, TIMBAWADI, JUNAGADH, GUJARAT 362 015
SOURCE: Indian Journal of Agricultural Sciences, (1987) Vol. 57, No. 2, pp. 82-84.
CODEN: IJASA3. ISSN: 0019-5022.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20 Apr 1987
Last Updated on STN: 20 Apr 1987

AB In an 8 + 8 diallel cross involving 8 parents, viz. 'GAUG 1', 'TG 1', 'Chico', 'NCAc 927', 'GNLM', 'PI 118989-3B', 'Pollachi 1' and 'Florigiant', of groundnut (Arachis hypogaea Linn.), both general (gca) and specific combining ability (sca) mean squares were substantial for days to 50% flowering, days to maturity, mature pods/plant, pod yield/plant, 100-kernel weight and shelling percentage. The mean squares of gca, however, accounted for a high proportion of the total variability, indicating a predominant role of additive gene action for all the traits. 'Chico' for days to 50% flowering, days to maturity and shelling percentage; 'TG 1' for pod yield/plant and 100-kernel weight and 'GAUG 1' for mature pods/plant were found to be the highest general combiners 'GAUG 1' + 'Chico' had the highest sca effect for pod yield besides days to 50% flowering and mature pods/plant. 'GAUG 1' in cross-combination with 'TG 1', 'PI 118989-3B', 'GNLM' and 'NCAc 927' showed high sca effects for shelling percentage, mature pods/plant, days to maturity and pod yield, respectively.

L14 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 10
ACCESSION NUMBER: 1986:558416 CAPLUS
DOCUMENT NUMBER: 105:158416
TITLE: Nitrogen-containing aromatic compounds in sediments from a polluted harbor in Puget Sound
AUTHOR(S): Krone, Cheryl A.; Burrows, Douglas G.; Brown, Donald W.; Robisch, Paul A.; Friedman, Andrew J.; Malins, Donald C.
CORPORATE SOURCE: Environ. Conserv. Div., Northwest Alaska Fish. Cent.,

Seattle, WA, 98112, USA
SOURCE: Environmental Science and Technology (1986), 20(11), 1144-50
CODEN: ESTHAG; ISSN: 0013-936X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Creosote oil and organic exts. of marine sediments were subjected to SiO2/Al2O3 column chromatog. to obtain fractions greatly enriched in N-containing aromatic compds. (NCAC), which were then characterized by gas chromatog. (GC) with N-specific detection and GC/mass spectrometry. A large number of NCAC were identified in sediments from creosote-contaminated Eagle Harbor, Puget Sound, Washington State, as well as in the sample of com. available creosote oil. No NCAC were detected in sediments from a pristine reference area (detection limit 10 ng/g). The total NCAC concns. in the Eagle Harbor sediments were .apprx.200-1200 μg/g of sediment (dry weight). Because many NCAC were known mutagens/carcinogens/teratogens, their presence in high concns. in sediments may pose various health risks for marine biota.

L14 ANSWER 29 OF 36 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1987:192988 BIOSIS
DOCUMENT NUMBER: PREV198783101112; BA83:101112
TITLE: GENETIC PREPOTENCY OF THE SOURCES OF RESISTANCE TO RUST AND LATE LEAF-SPOT IN GROUNDNUT.
AUTHOR(S): BASU M S [Reprint author]; SINGH N P; VADDORIA M A; REDDY P S
CORPORATE SOURCE: NATL RES CENT FOR GROUNDNUT, TIMBAWADI, JUNAGADH, GUJARAT 362 015
SOURCE: Indian Journal of Agricultural Sciences, (1986) Vol. 56, No. 12, pp. 822-828.
CODEN: IJASA3. ISSN: 0019-5022.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20 Apr 1987
Last Updated on STN: 20 Apr 1987
AB In 2 sets of 5 + 5 line + tester crosses involving 5 donor lines, 'EC 76446 (292)', 'NCAc 17133 (RF)', 'NCAc 17090', 'PI 259747' and 'PI 350680'; resistant to both rust (Puccinia arachidia Spegazzini) and late leaf-spot [Cercosporidium personatum (Bark. and Curt.) Deighton], were crossed with 10 varieties of groundnut (Arachis hypogaea Linn.). 'NCAc 17133 (RF)' was found to be the highest specific combiner for nodes on main stem, underground pegs, mature pods/plant, weight of mature pods/plant, 100-kernel weight and shelling percentage and the same was involved in 7 crosses. Hence selection from the progeny involving 'NCAc 17133 (RF)' would be more rewarding than the other donors in resistance-breeding programme for rust and late leaf-spot in groundnut.

L14 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:421873 CAPLUS
DOCUMENT NUMBER: 105:21873
TITLE: Anatomical and biochemical studies of the resistance and susceptibility of groundnut varieties to Cercospora leaf spot
AUTHOR(S): Basra, Ranjit Kaur; Kaur, Sukhwinder; Dhillon, M.
CORPORATE SOURCE: Coll. Bas. Sci. Humanit., Punjab Agric. Univ., Ludhiana, 141004, India
SOURCE: Annals of Biology (Ludhiana, India) (1985), 1(1), 7-12
CODEN: ANBIEO; ISSN: 0970-0153
DOCUMENT TYPE: Journal

LANGUAGE: English

AB A comparative study of certain Cercospora leaf spot resistant and susceptible varieties of groundnut (Arachis hypogaea) was made. The leaves of resistant vaarieties (PI 250747, PI 381622, and PI 405132) possessed a higher average thickness of the epidermis and its cuticle and a lower frequency and size of stomata as compared with moderately susceptible (RG-4, RG-6 and RS-7) and susceptible (Sel-1, Sel-3 and Sel-4) varieties. Thicker palisade cell layers concomitant with lesser spongy tissue were characteristic of resistant varieties. The leaves of resistant varieties (PI 350680 and NCAC-17133 RF) had higher levels of chlorophyll, starch, reducing sugars, protein and lower levels of total sugars, nonreducing sugars and free amino acids than the susceptible varieties (Sel-1 and Sel-4). Thus, the formation of a metabolic sink for sugars and free amino acids in susceptible leaves is indicated.

L14 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1969:501470 CAPLUS
DOCUMENT NUMBER: 71:101470
ORIGINAL REFERENCE NO.: 71:18881a,18884a
TITLE: Reaction of acetophenone with p-nitrobenzenediazonium chloride
AUTHOR(S): Razumovskii, V. V.; Rychkina, E. F.
CORPORATE SOURCE: Leningrad. Elektrotekh. Inst. Svyazi im. Bonch-Bruevicha, Leningrad, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1969), 5(7), 1255-7
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The reaction of PhCOMe with p-O2NC6H4N2Cl gave PhCOCH2N:NC6H4NO2-p and small amts. of PhCOC(:NNHC6H4-NO2-P)N:NC6H4NO2-P, analogous to PhN:NCAc:NNHPh prepared in 1892 by H. V. Pechman.

L14 ANSWER 32 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1965:59443 CAPLUS
DOCUMENT NUMBER: 62:59443
ORIGINAL REFERENCE NO.: 62:10566h,10567a-d
TITLE: Azo disulfide dyes
PATENT ASSIGNEE(S): Martin-Marietta Corp.
SOURCE: 21 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6402182		19640914	NL 1964-2182	19640304
BE 644981			BE	
FR 1393634			FR	
GB 1025042			GB	
US 3261825			US	
PRIORITY APPLN. INFO.:			US	19630311

GI For diagram(s), see printed CA Issue.

AB The title compds. of the general formula I, in which R is an arylene radical, R' is Cl or NHPh, and R'' is a dye moiety, are prepared by condensing cyanuric chloride (Ia) successively with an aminoazo compound, a bis(aminoaryl) disulfide, and optionally with an amine. I dye cotton light- and washfast shades by means of a reduction-oxidation procedure in which the fibers can be washed before the oxidation step without appreciable color loss; the dyeings can be aftertreated with resins without sacrificing their properties. Thus, 138.06 g. p-O2NC6H4NH2 (II) was diazotized and

coupled with 207 g. o-AcCH2CONHC6H4OMe (III), the product reduced with 100 g. NaSH, the resulting dye (326 g.) added within 2-3 hrs. at 5° to a solution of 184 g. Ia in 1 kg. Me2CO, the reaction mixture stirred 30 min. at 5°, 265 g. 20% NaOH added within 30 min., the mixture stirred 30 min., a solution of 124 g. (4-H2NC6H4S)2 (IV) in 300 g. Me2CO added at 20°, then 265 g. 20% NaOH added within 30 min., the solution heated to 60°, the Me2CO distilled, H2O added, and the precipitate filtered, washed, and dried at 80° gave I (R = p-C6H4, R' = Cl, and R'' = 4-NHC6H4N:NCAc:C(OH)NHC6H4OMe-2), brilliant greenish yellow on cotton. Similarly, other I were prepared from Ia (reactants and shade on cotton given): m-O2NC6H4NH2 (V) → III, IV, greenish yellow; V → 3-methyl-5-pyrazolone, IV, brilliant yellow; II → 1-phenyl-3-methyl-5-pyrazolone (VI), IV, brilliant orange (VII); V → VI, IV, brilliant yellow; II → VI, (4,1-H2-NC10H6S)2, brilliant orange; II → VI, [3,4,1-MeO(H2N)C10H5S]2, brilliant orange; II → 2,4-dihydroxyquinoline, IV, reddish orange; II → 2-C10H7OH, IV, reddish brown. A dye, reddish orange on cotton, was also prepared by condensing at 45° a slightly acid solution of 1 mole VII in Me2CO with 186 g. PhNH2 by the addition of 530 g. 20% NaOH. Two other dyes were prepared: one by replacement of III by 1 mole Naphthol AS-OL in the 1st example and the other by replacement of IV by 0.5 mole [2,4-Cl(H2N)C6H3S]2 in the 1st example.

L14 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1963:468812 CAPLUS
DOCUMENT NUMBER: 59:68812
ORIGINAL REFERENCE NO.: 59:12670a-h,12671a-e
TITLE: Japp-Klingemann cleavages. II. Preparation of arylhydrazones of α-oxo sulfones from α-arylazo-α-alkyl-β-oxo sulfones
AUTHOR(S): Eistert, Bernd; Regitz, Manfred
CORPORATE SOURCE: Univ. Saarlandes, Saarbruecken, Germany
SOURCE: Chemische Berichte (1963), 96(9), 2290-303
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 59:68812
AB cf. CA 59, 11410d. 10. PhSO2CH2Ac with 1 equivalent PhCH2Cl by the method of O'Sullivan, et al. (CA 57, 9715h), yielded more than 90% PhSO2CHAcCH2Ph (I). Powdered I (2.9 g.) and 4.0 g. NaOAc in 50 cc. EtOH treated at 10° with stirring during 0.5 hr. with diazotized 1.3 g. p-ClC6H4NH2 (II), stirred 2 hrs. at room temperature, treated dropwise with an addnl. 0.65 g. diazotized II, diluted after 2 hrs. with 50 cc. H2O, and filtered yielded 3.6 g. p-ClC6H4N:NCAc(CH2Ph)SO2Ph (III), orange-red crystals, m. 118° (EtOH). I (2.9 g.) with diazotized 1.46 and 0.70 g. p-O2NC6H4NH2 (IV) gave similarly 3.9 g. p-O2N analog (V) of III, orange-red needles, m. 127° (EtOH). III (1.0 g.), 30 cc. MeOH, and 1 cc. concentrated HCl stirred 14 hrs. at room temperature and evaporated yielded 0.8 g.
p-ClC6H4NHN:C(CH2Ph)SO2Ph (VI), leaflets, m. 152° (EtOH). V (1.0 g.) yielded similarly during 7 hrs. 0.81 g. p-NO2 analog of VI, yellow crystals, m. 198° (EtOH). Dry p-MeC6H4SO2H (VII) (55.0 g.) in 200 cc. absolute EtOH added to 8.2 g. Na in 300 cc. absolute EtOH, treated dropwise with 47.0 g. 2-chlorocyclohexanone, refluxed 18 hrs., distilled to remove about 250 cc. EtOH, filtered, and evaporated, the residue boiled with Et2O to leave about 15 g. Na salt of VII, and the extract evaporated yielded 35-40 g. 2-(p-toluenesulfonyl)cyclohexanone (VIII), needles, m. 80-1° (EtOH). VIII (2.5 g.) in 50 cc. EtOH and 6.0 g. KOAc treated at 0-5° with stirring with 1.25 g. diazotized II, stirred at room temperature overnight, treated with 50 cc. H2O and 5 cc. concentrated HCl, and filtered yielded 3.8 g. p-MeC6H4SO2(p-ClC6H4NHN:)C(CH2)4CO2H (IX), m. 183° (EtOH). IX (1.0

g.) added to 80 cc. CH_2N_2-Et_2O yielded 0.9 g. Me ester (X) of IX, m. 117° (MeOH). VIII (5.0 g.) in 150 cc. EtOH treated at 0-5° with diazotized 2.5 g. II and then dropwise with saturated aqueous NaOAc to pH 5-6, diluted with 30 cc. iced H_2O, and decanted after 5 min., and the resinous residue dissolved in 80 cc. MeOH and 2 cc. concentrated HCl and evaporated after 1 hr. yielded 6.7 g. X. VIII (5.0 g.) in 100 cc. EtOH and 11.0 g. NaOAc treated dropwise at 0-5° with diazotized 2.8 g. IV, stirred 1 hr. at room temperature while being diluted with 100 cc. H_2O in portions, and filtered yielded 8.0 g. 2-(p $O_2NC_6H_4N$:N) derivative (XI) of VIII, orange crystals, decomposing 156-7° (EtOH), which from AcOH gave XI.AcOH, orange-red leaflets, decomposing 155°, with the evolution of AcOH; XI.AcOH recrystd. from EtOH yielded XI, m. 156-7° (decomposition). XI (2.0 g.) and 0.6 g. KOH in 30 cc. H_2O stirred 0.5 hr. at room temperature and acidified with 6N HCl yielded about 0.4 g. p-$MeC_6H_4SO_2$(p-$O_2NC_6H_4NHN$:)$C(CH_2)_4CO_2H$ (XII), light yellow leaflets, decomposing 171° (EtOH). XI (1.0 g.) in 10 cc. 6N HCl heated 10 min. with shaking on the water bath, cooled, diluted with 50 cc. H_2O, and extracted with Et_2O, the Et_2O extract reextd. with 100 cc. saturated aqueous $NaHCO_3$, and the alkaline extract acidified with stirring with 6N HCl yielded 0.8 g. XII. XII (0.8 g.) with 70 cc. $CH_2N_2Et_2O$ yielded 0.6 g. Me ester (XIII) of XII, yellow leaflets, m. 138°. XI (3.0 g.) stirred 2 hrs. at room temperature with 100 cc. MeOH and 2 cc. concentrated HCl yielded 2.8 g. XIII. 1-Thiotetrahydro-3-pyranone 1,1-dioxide (XIV) (21.0 g.) and 26.4 g. MeI added successively to 5.9 g. K in 45 cc. MeOH, refluxed 4 hrs. with stirring, and evaporated, the residue boiled with $CHCl_3$, and the extract worked up gave 14.1 g. 2-Me derivative (XV) of XIV, needles, m. 79-81° (EtOH). XIV (5.0 g.) in 100 cc. MeOH and 20 cc. MeI treated with cooling and stirring with 5.9 g. Ag_2O, stirred 24 hrs. at room temperature, filtered, and evaporated yielded XV. XV (3.0 g.) in 50 cc. EtOH and 50 cc. H_2O treated with stirring at 0° with 3.3 g. diazotized II in 50 cc. H_2O and then dropwise with stirring with 10% aqueous NaOAc to pH 5-6, and filtered after 1 hr. yielded 4.5 g. 2-(p-chlorophenylazo)-2-methyl-1-thiotetrahydro-3-pyranone 1,1-dioxide (XVI), yellow needles, m. 149° (EtOH). XVI (0.4 g.) treated with 8 cc. 6N HCl and extracted with Et_2O, the extract reextd. with 20 cc. 10% aqueous KOH, and the alkaline extract acidified yielded 0.35 g. p-ClC_6H_4NHN:$CMeSO_2(CH_2)_3CO_2H$ (XVII), flakes, m. 152° (aqueous EtOH). XVII (0.5 g.) with 50 cc. CH_2N_2-Et_2O yielded 0.5 g. Me ester (XVIII) of XVII, leaflets, m. 109° (MeOH-H_2O). XVI (1.5 g.), 40 cc. MeOH, and 1 cc. concentrated HCl stirred 2 hrs. at room temperature gave about 1.4 g. XVIII. XVI (1.5 g.) refluxed 4 hrs. with 75 cc. EtOH, filtered, and evaporated, and the oily residue triturated with Et_2O gave 1.0 g. Et ester of XVIII, flakes, m. 100° (1:3 Et_2O-petr. ether). XV (1.0 g.) in 20 cc. EtOH treated at 0° with stirring successively with diazotized 0.85 g. IV and saturated aqueous NaOAc to pH 5-6 and filtered, the precipitate shaken 0.5 hr. with 300 cc. Et_2O, and the Et_2O solution extracted with saturated aqueous $NaHCO_3$, dried, and evaporated yielded 1.3 g. p-NO_2 analog (XIX) of XVI, orange-red needles, decomposing 156° (EtOH). XV (4.0 g.) in 60 cc. EtOH and 60 cc. H_2O treated with diazotized 3.4 g. IV and then dropwise at 0° with stirring with 10% aqueous NAOc to pH 5-6, stirred 2 hrs., and worked up in the usual manner yielded 5.0 g. p-NO_2 analog (XX) of XVII, yellow needles, decomposing 203° (aqueous AcOH). Powdered XX (1.0 g.) with 80 cc. CH_2N_2-Et_2O yielded 1.0 g. Me ester (XXI) of XX, light yellow needles, m. 147° (EtOH). XIX (0.15 g.), 10 cc. MeOH, and 2 drops concentrated HCl stirred about 1 hr. at room temperature yielded nearly quant. XXI. Dihydrothionaphthen-3-one 1,1-dioxide (XXII) (5.0 g.) in 250 cc. MeOH treated with stirring with 5.1

g. Ag2O and 21 cc. MeI, stirred 24 hrs., filtered, and evaporated, and the residue boiled with 15 cc. EtOH and C and cooled gave 2.7 g. 2-Me derivative (XXIII) of XXII, m. 109° (EtOH). XXIII (1.7 g.) in 40 cc. EtOH treated at 0° with stirring with diazotized 1.1 g. II and then with N NaOAc to pH 5, and filtered, the residue (2.1 g.) shaken with 200 cc. Et2O, and the extract evaporated yielded 2-(p-chlorophenylazo)-2-methyldihydro-3-thionaphthenone 1,1-dioxide (XXIV), yellow to orange needles, m. 100° (EtOH). Crude XXIII (0.8 g.) treated in the usual manner with diazotized 0.6 g. IV yielded the p-NO2 analog (XXV) of XXIV, orange-red needles, decomposing 156° (EtOH). Crude XXIII (2.0 g.) in 40 cc. EtOH with diazotized 1.4 g. p-MeOC6H4NH2 (XXVI) yielded p-MeO analog (XXVII) of XXIV, orangered needles, decomposing 129° (EtOH). o-HSC6H4CO2H (20.0 g.) and 60.0 g. Na2CO3 in 200 cc. H2O treated dropwise with stirring with 25.0 g. MeCHBrCO2Et, refluxed 2 hrs., cooled, adjusted dropwise with 6N HCl to pH 3-4, and filtered yielded 27.0 g. o-HO2CC6H4SCHMeCO2H (XXVIII), leaflets, m. 199-200° (H2O). XXVIII (6.0 g.) in 100 cc. HCO2H treated at 30-5° with stirring and cooling dropwise with 10 cc. 30% H2O2, stirred overnight, and evaporated at 40° yielded 4.8 g. o-HO2CC6H4SO2CHMeCO2H (XXIX), m. 185° with previous sintering (aqueous EtOH). XXIX heated until the CO2 evolution ceased gave nearly 100% XXIII. XXIX (6.7 g.) with 200 cc. N2CH2-Et2O yielded 4.9 g. di-Me ester (XXX) of XXIX, m. 76-7° (MeOH). XXIV, 50 cc. MeOH, and 1 cc. concentrated HCl stirred 2 hrs. at room temperature and treated with diazotized II yielded p-ClC6H4NHN:CMeO2SC6H4CO2Me-o (XXXI), leaflets, . 166° (MeOH). XXX (2.5 g.) in 25 cc. MeOH treated at 0° with 1.5 g. NaOH in 15 cc. H2O and then during 10 min. with diazotized 1.1 g. II and the product esterified with 25 cc. MeOH and 2 cc. HCl yielded XXXI, leaflets, m. 166-7°. XXV (0.4 g.) in 30 cc. MeOH stirred 5 hrs. at room temperature with 1 cc. concentrated HCl gave the p-NO2 analog (XXXII) of XXXI, yellow needles, decomposing 182° with previous browning (aqueous MeOH). XXX (2.5 g.) in 25 cc. MeOH treated at 0° with 1.5 g. NaOH in 15 cc. H2O and then at 0° with diazotized 1.1 g. IV, and the product esterified with 25 cc. MeOH and 2 cc. concentrated HCl yielded XXXII, yellow needles, decomposing 183° (aqueous MeOH). XXVII (1.0 g.), 25 cc. MeOH, and 0.5 cc. concentrated HCl stirred overnight yielded the p-MeO analog (XXXIII) of XXXI, light yellow needles, m. 136° (MeOH). XXX (2.5 g.) treated in the usual manner with diazotized 0.95 g. XXVI yielded XXXIII, m. 135-6°. The ultraviolet absorption spectra of III, VI, XIX, XX, XXVII, and XXXIII are recorded. The ultraviolet absorption maximum of the various azo compds. and arylhydrazones are tabulated.

L14 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1931:8602 CAPLUS
DOCUMENT NUMBER: 25:8602
ORIGINAL REFERENCE NO.: 25:916h-i,917a-d
TITLE: Mechanism of the formation of hydrazones from diazonium compounds and alkyl derivatives of acetylacetic, malonic and cyanoacetic esters
AUTHOR(S): Favrel, G.
SOURCE: Bull. soc. chim. [4] (1930), 47, 1290-1300
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB According to Japp and Klingemann (Ber. 20, 2942(1887)) diazonium compds. react with alkylacetylacetic esters in alkaline solution to form hydrazones. J.
and K. represent the reaction in 1 step. F. believes that it should be represented as taking place in 3 steps: (1) formation of H2O and a mixed azo compound; (2) action of the mixed azo compound with NaOH to give AcONa and a new mixed azo compound; (3) the mol. rearrangement of this new azo compound to give a hydrazone isomeric with it. F. has attempted to isolate the mixed azo compound formed in the first step. m-C6H4(NH2)NO2 (0.1 mol.) was

diazotized in HCl, and excess AcONa solution added to give an AcOH solution of the diazonium hydroxide (I). Powdered CaCO3 was then added to this solution at 0°, until it contained 0.05 mol. AcOH per 0.1 mol. of I. An equimol. quantity of CHEtAcCO2Et in 30 cc. Et2O was added, and the whole kept at 0° for 30 min. The sirup from the Et2O extract gave after 3 months crystals of Et m-nitrophenylazoethylacetylacetate, m-O2NC6H4N:NCEtAcCO2Et, m. 132-3°, pale yellow, decomposed by dilute alkali and by H2O. From I and CHMeAcCO2Et was obtained m-O2NC6H4N:NCMeAcCO2Et, m. 122-3°, decomposed by dilute alkali. Diazonium compds. of toluidines, chloroanilines, bromoanilines, etc., gave with alkylacetylacetic esters liquids which could not be purified, and which were probably mixed azo compds., since they were hydrolyzed by H2O or dilute alkali to hydrazones. Using the method of condensation described above, the tetrazonium hydroxide (II) formed from benzidine gave, when condensed with CHEt(CO2Et)2 (III), [C6H4NEtN:C(CO2Et)2]2, m. 112-4°; with CH- Me(CO2Me)2 II gave [C6H4NMeN: C(CO2Me)2]2, m. 103-4°. The tetrazonium hydroxide prepared from tolidine gave, when condensed with III, [C6H3MeNEtN:C(CO2Et)2]2, m. 118-20° (decomposition). The tetrazonium hydroxide of bianisidine when condensed with III gave [C6H3(OMe)NEtN : C(CO2Et)2]2, m. 115-6°. Thus, tetrazonium hydroxides reacting with alkylmalonic esters give N-alkyldihydrazones which are isomeric with the mixed azo compds. which one might expect to be formed. The diazonium compound of p-BrC6H4NH2 gave with CHEt(CN)CO2Et (IV), p-BrC6H4NEtN : C(CN) CO2Et, m. 56-7°, and p-BrC6H4NN : CEt(CN) CO2Et (formula given by F., but should probably be p-BrC6H4N : NCEt(CN)CO2Et), m. 111-2°. I with CHMe(CN)CO2Et gave m-O2NC6H4NMeN : C(CN)CO2Et (F. gave m-O2NC6H4NMeN:C(CN)CO2Et), m. 148°, and an isomer in the form of a mixed azo compound, m-O2NC6H4N : NCMe(CN) CO2- Et, m. 197-8°. PhN2OH (V) and IV gave a N-ethylhydrazone (prepared by Krucke- berg, J. prakt. Chemical 47, 591(1893)), m. 72°, and the isomeric mixed azo compound, m. 126°. V with CHAc(CN)CO2Et gave PhN : NCAc(CN)CO2Et, m. 129-30°.

L14 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1926:4890 CAPLUS
DOCUMENT NUMBER: 20:4890
ORIGINAL REFERENCE NO.: 20:598h-i,599a-c
TITLE: New azo combinations with diacetosuccinic ester and the Billow synthesis of substituted pyrazoles
AUTHOR(S): Bulow, C.; Baur, K.
SOURCE: Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen (1925), 58B, 1926-32
CODEN: BDCBAD; ISSN: 0365-9488
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. Ber. 33, 262(1900); Dimroth, C. A. 3, 439. Di-Et [acetyl-p-phenylenediamine-azo]diacetosuccinate, RN:NCAc(CO2Et)CHAcCO2Et (I, R = AcNHC6H4), from diazotized p-AcNHC6H4NH2 in HCl with (CHAcCO2Et)2 and NaOAc in cold aqueous alc., m. 134°, does not give the Bulow reaction, is easily converted by long standing in alc., by boiling in dilute alc. or AcOH or by fusion into di-Et 5-methyl-1-[p-acetylaminophenyl]pyrazole-3,4-dicarboxylate (best prepared by treating the original coupling mixture directly with steam), m. 158°, which is hydrolyzed by boiling alc. KOH to the free acid, m. 264° (decomposition), can be titrated very accurately, is not precipitated by AcOH from aqueous solns. of the di-K salt; the 1-p-aminophenyl acid, from the above ester with 1:1 HCl, m. 276° (decomposition), is distinctly amphoteric; although it forms no solid HCl salt, its suspensions in mineral acids yield clear diazo solns. (II) which under suitable conditions can be coupled with keto-enol desmotropes of the type of AcCH2CO2Et, yielding

with AcCH2CO2Et itself Et[5-methylpyrazole-3,4-dicarboxy-1-p-aniline-azo]acetoacetate, EtO2CCHAcN:NC6H4N<CMe:CCO2H N= =CCO2H, yellow, m. 215-6° (decomposition), and with AcCH2CONHPh the corresponding acetoacetanilide, decomps. about 266°, which cannot be titrated and whose C3H3N salt in H2O gives ppts. with metallic salts. Di-Et [5-methylpyrazole-3,4-dicarboxy-1-p-aniline-azo]acetonedicarboxylate, from II and CO(CH2CO2Et)2, yellow hydrated leaflets (1 or 2H3O), m. anhydrous around 140°, yields with alkalies needles, decompose 265°, containing 49.12-49.23% C, 3.89% H and 13.40% N. p-AcNHC0H4NH2, m. 195-6°, is obtained in 57% yield from 25.2 g. com. distilled (C6H4NH2)2 and 14 g. Ac2O in CHCl3 in the cold. Di-Et [N-monoacetylbenzidine-azo]diacclosuccinate, m. 163° (decomposition), does not give the Bulow reaction. Di-Et 5-methyl 1-[p-acetylaminodiphenyl]pyrazole-3,4-dicarboxylate, m. 168°; free acid, m. 285°(decomposition); K H salt, decomps. 325 °; di-K salt; 1-p-aminodiphenyl acid, m. 287° (decomposition). Tetra-Et diacetosuccinate[azobenzidine-azo]diacetosuccinate, from tetrazotized (C6H4NH2)2 and (CHAcCO2Et)2, faintly yellow, m. 152° (decomposition), does not give the Bulow reaction. Tetra-El 1-p-diphenylbis-[5-methylpyrazole-3,4-dicarboxylate], m. 141°; free acid, m. 302° (decomposition); tetra-K salt; di-K salt, does not change up to 350°.

L14 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1916:931 CAPLUS
DOCUMENT NUMBER: 10:931
ORIGINAL REFERENCE NO.: 10:172b-f
TITLE: Non-aromatic diazonium salts. IV. Thiazole-2-diazonium salts
AUTHOR(S): Morgan, Gilbert T.; Morrow, Genevieve V.
CORPORATE SOURCE: Roy. Coll. Sci., Dublin, Ire.
SOURCE: Journal of the Chemical Society, Transactions (1915), 107, 1291-6
CODEN: JCHTA3; ISSN: 0368-1645
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB M. and M. have determined the best conditions for the diazotization of 2-aminothiazole (A) prepared by Traumann's method (cf. Ann. 249, 35(1888)). (A) was very readily diazotized in 20% H2SO4 by means of N aqueous NaNO2 and the diazo compound isolated as the chloroaurate (B), [S.CH: CHN: C.N2]AuCl4, yellow crystals, m. 122° (decomposition), stable at ordinary temperature and hydrolyzed by H2O. An attempted diazotization of (A) in cold dilute HCl led to the formation of brown amorphous products [thiazolediazohydroxide(?); cf. Nef, Ann. 265, 110(1891)]. Diazotization of (A) in HClO4 by means of EtNO2 proceeded smoothly but formed an extremely explosive diazonium perchlorate. In HNO3 the diazotization of (A) proved unsatisfactory, owing to the insolubility of the nitrate of (A). Solns. of thiazolediazonium salts when added to β-naphthol in EtOH formed thiazoleazo-β-naphthol(?), brownish red plates from C6H6 which partly dissolved in aqueous NaOH, leaving a Cu-red flaky residue, m. 105°. The NaOH solution upon acidification yielded a pale red substance, m. 126°. Both of these fractions gave an intense purple color with H2SO4. Thiazoleazo-β-naphthylamine, amorphous bluish red compound, m. 135-40°, gives an orange color with concentrated H2SO4 and a magenta color on dilution CH2Ac2 reacting with thioldiazonium nitrate in the presence of (NH4)2CO3 formed thiazole-2-azoacetylacetone, S.CH: CH.N: CN: NCAc:CMeOH.

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L15 62 "5-CNAC" OR CNAC

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L16  ANSWER 1 OF 49  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2007:508855  CAPLUS
DOCUMENT NUMBER:         146:455743
TITLE:                   Use of calcitonin formulations for the treatment of
                         rheumatoid arthritis
INVENTOR(S):             Azria, Moise; Christiansen, Claus
PATENT ASSIGNEE(S):      Novartis AG, Switz.; Novartis Pharma GmbH; Nordic
                         Bioscience A/S
SOURCE:                  PCT Int. Appl., 43pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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     WO 2007051641        A1    20070510    WO 2006-EP10576        20061103
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             GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN,
             KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK,
             MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
             RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT,
             TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:                       GB 2005-22566       A  20051104
OTHER SOURCE(S):         MARPAT 146:455743
GI
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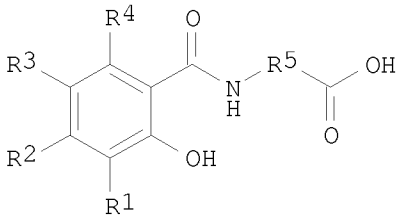

I

AB The present invention relates to a novel use of calcitonin in rheumatoid arthritis, and to methods of treating and/or preventing rheumatoid arthritis and conditions associated therewith in mammals, particularly humans. In particular, a method is provided of preventing or/and treating rheumatoid arthritis in a patient in need thereof comprising administering to said patient a therapeutically effective amount of calcitonin, e.g.

salmon calcitonin in free form or salt form, in a pharmaceutically acceptable oral delivery form, wherein the therapeutically effective amount of a calcitonin is delivered orally in a composition comprising the calcitonin and a delivery agent for calcitonin. The delivery agent is a compound of formula I, wherein R1, R2, R3, and R4 are independently H, OH, NR6R7, halo, C1-C4 alkyl, or C1-C4alkoxy; R5 is (un)substituted C2-C16alkylene, (un)substituted C2-C16alkenylene, (un)substituted C1-C12alkyl(arylene), or (un)substituted aryl(C1-C12alkylene); and R6 and R7 are independently H, O or C1-C4 alkyl; and hydrates and alc. solvates thereof.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 2 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2007:334556 BIOSIS
DOCUMENT NUMBER: PREV200700331683
TITLE: O-GlcNAcase exacerbates post-hypoxic cardiac myocyte death.
AUTHOR(S): Ngoh, Gladys Afor [Reprint Author]; Watson, Lewis J.; Jones, Steven P.
CORPORATE SOURCE: Univ Louisville, Inst Mol Cardiol, Louisville, KY 40202 USA
SOURCE: FASEB Journal, (APR 2007) Vol. 21, No. 6, pp. A1376. Meeting Info.: Experimental Biology 2007 Annual Meeting. Washington, DC, USA. April 28 -May 02, 2007. Amer Assoc Anatomists; Amer Physiol Soc; Amer Soc Biochem & Mol biol; Amer Soc Investigat Pathol; Amer Soc Nutr; Amer Soc Pharmacol & Expt Therapeut.
CODEN: FAJOEC. ISSN: 0892-6638.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 30 May 2007
Last Updated on STN: 30 May 2007

AB We have recently found that hypoxia-reoxygenation reduces global levels of a cytoprotective metabolic signal (O-linked beta-N-acetylglucosamine, i.e. O-GlcNAc). Such observations may indicate a net increase in O-GlcNAcase (GCA, removes O-GlcNAc) activity. Because O-GIcNAc exerts protective effects on the myocardium, we hypothesized that gene transfer of GCA further reduces O-GlcNAc levels and sensitizes cardiac myocytes to post-hypoxic injury. Isolated cardiac myocytes (n=4-5/group) were infected with adenovirus overexpressing GCA (AdGCA), or treated with GCA inhibitors, and subjected to hypoxia and reoxygenation. Whole cell lysates were immunoblotted for O-GlcNAc levels, cell injury assessed via posthypoxic LDH release, and post-hypoxic loss of mitochondrial membrane potential evaluated with tetramethylrhodamine methyl ester (TMRM). Overexpression of GCA significantly reduced ($p < 0.05$) O-G]cNAc levels, exacerbated post-hypoxic LDH release, and favored the loss of mitochondrial membrane potential. GCA inhibition (via PUGNAc, streptozotocin, or alloxan) significantly enhanced ($p<0.05$) O-GlcNAc levels, reduced post-hypoxic LDH release, and preserved mitochondrial membrane potential. We conclude that hypoxia favors the net loss of the O-GlcNAc post- translational modification reflected by the hypoxia-sensitizing effects of GCA in cardiac myocytes.[GRAPHICS]ane. Conclusions: Phosphorylation of 5LO determines whether 15ELX (antiinflammatory) or LTB4 (inflammatory mediator) are produced.

L16 ANSWER 3 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2007:332156 BIOSIS
DOCUMENT NUMBER: PREV200700329283
TITLE: Z Increasing levels of O-linked N-acetylglucosamine (O-GlcNAc) on cardiac proteins during reperfusion improves recovery following ischemia/reperfusion and attenuates calpain-mediated proteolysis.
AUTHOR(S): Liu, Jia [Reprint Author]; Marchase, Richard B.; Chatham,

John C.
CORPORATE SOURCE: Univ Alabama, Birmingham, AL 35294 USA
SOURCE: FASEB Journal, (APR 2007) Vol. 21, No. 6, pp. A865.
Meeting Info.: Experimental Biology 2007 Annual Meeting. Washington, DC, USA. April 28 -May 02, 2007. Amer Assoc Anatomists; Amer Physiol Soc; Amer Soc Biochem & Mol biol; Amer Soc Investigat Pathol; Amer Soc Nutr; Amer Soc Pharmacol & Expt Therapeut.
CODEN: FAJOEC. ISSN: 0892-6638.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
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ENTRY DATE: Entered STN: 30 May 2007
Last Updated on STN: 30 May 2007

AB We have previously shown that pre-ischemic treatment with glucosamine improved cardiac functional recovery following ischemia/reperfusion (I/R) mediated, at least in part, via elevated protein O-GlcNAc levels. However, since pre-ischemic treatment strategies are impractical for treatment of patients with myocardial ischemia, the goal of this study was to determine whether increasing protein O-GlcNAc levels only during reperfusion also improved recovery of function. Isolated perfused rat hearts were subjected to 20 min global, no flow ischemia followed by 60 min of reperfusion. Administration of glucosamine (10mM) or an inhibitor of O-GlcNAcase, O-(2-acetamido-2-deoxy-d-glucopyranosylidene) amino-N-phenylcarbamate (PUGNAc, 200 mu M), during only the first 20 min of reperfusion significantly improved cardiac function, reduced troponin release and increased protein O-G]cNAc and ATP levels compared to untreated control. I/R resulted in significant loss of Ca (2+)/calmodulin-dependent protein kinase 11 (CaMKII) and cleavage of a-fodrin both of which are targets of the Ca2+-activated protease calpain. Both glucosamine and PUGNAc attenuated proteolysis of alpha-fodrin and CaMKII and there was a significant correlation between function at the end or reperfusion and the amount of a-fodrin cleavage. Thus, two independent strategies for increasing protein O-GlcNAc levels in the heart only during reperfusion significantly improved recovery and this was associated with attenuation of calcium-mediated proteolysis.

L16 ANSWER 4 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:605485 CAPLUS
DOCUMENT NUMBER: 145:83126
TITLE: Process for the preparation of N-(5-chlorosalicyloyl)-8-aminocaprylic acid salt
INVENTOR(S): Riss, Bernhard; Meier, Ulrich
PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH
SOURCE: PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006063821	A1	20060622	WO 2005-EP13454	20051214

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,

IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

AU 2005315850	A1	20060622	AU 2005-315850	20051214
CA 2587213	A1	20060622	CA 2005-2587213	20051214
EP 1838664	A1	20071003	EP 2005-818421	20051214
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR				
CN 101080384	A	20071128	CN 2005-80043124	20051214
IN 2007DN03733	A	20070824	IN 2007-DN3733	20070518
KR 2007086276	A	20070827	KR 2007-713580	20070615
PRIORITY APPLN. INFO.:			GB 2004-27603 A	20041216
			WO 2005-EP13454 W	20051214

OTHER SOURCE(S): MARPAT 145:83126

AB The present invention relates to a method of preparing N-substituted salicylamides or derivs. thereof, and their salts, hydrates and solvates. In particular, the present invention relates to a method of preparing N-(5-chlorosalicyloyl)-8-aminocaprylic acid (5-CNAC) and its corresponding disodium monohydrate.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 5 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:608730 CAPLUS
DOCUMENT NUMBER: 145:83127
TITLE: Process for the preparation of N-(5-chlorosalicyloyl)-8-aminocaprylic acid and salt
INVENTOR(S): Riss, Bernhard
PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006063819	A2	20060622	WO 2005-EP13452	20051214
WO 2006063819	A3	20060914		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005315848	A1	20060622	AU 2005-315848	20051214
CA 2587428	A1	20060622	CA 2005-2587428	20051214
EP 1828103	A2	20070905	EP 2005-817575	20051214
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR				
CN 101080381	A	20071128	CN 2005-80043173	20051214
IN 2007DN03776	A	20070831	IN 2007-DN3776	20070521
KR 2007086233	A	20070827	KR 2007-713509	20070615
PRIORITY APPLN. INFO.:			GB 2004-27600 A	20041216

WO 2005-EP13452 W 20051214
OTHER SOURCE(S): CASREACT 145:83127; MARPAT 145:83127
AB The present invention relates to a method of preparing N-substituted salicylamides or derivs. thereof and their derivs., e.g. their salts. In particular, the present invention relates to a method of preparing N-(5-chlorosalicyloyl)-8-aminocaprylic acid (5-CNAC) and its corresponding disodium monohydrate.

L16 ANSWER 6 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:326993 BIOSIS
DOCUMENT NUMBER: PREV200600333299
TITLE: UDP-N-ACETYLGLUCOSAMINE: GALACTOSE-beta 1,3-N-ACETYLGALACTOSAMINE-alpha-R / N-ACETYLGLUCOSAMINE-beta 1,3,-N-ACETYLGALACTOSAMINE-alpha-R (GLCNAC TO GALNAC) beta 1,6-N-ACETYLGLUCOSAMINYLTRANSFERASE, C2/4GNT.
AUTHOR(S): Clausen, Henrik [Inventor]; Schwientek, Tilo [Inventor]
CORPORATE SOURCE: Holte, Denmark
ASSIGNEE: Glycozym ApS
PATENT INFORMATION: US 06995004 20060207
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (FEB 7 2006)
CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 28 Jun 2006
Last Updated on STN: 28 Jun 2006
AB A novel gene defining a novel human UDP-GlcNAc: Gal/Gl cNAc beta 1-3GalNAc alpha beta 1, 6GlcNAc-transferase, termed C2/4GnT, with unique enzymatic properties is disclosed. The enzymatic activity of C2/4GnT is shown to be distinct from that of previously identified enzymes of this gene family. The invention discloses isolated DNA molecules and DNA constructs encoding C2/4GnT and derivatives thereof by way of amino acid deletion, substitution or insertion exhibiting C2/4GnT activity, as well as cloning and expression vectors including such DNA, cells transfected with the vectors, and recombinant methods for providing C2/4GnT. The enzyme C2/4GnT and C2/4GnT-active derivatives thereof are disclosed, in particular soluble derivatives comprising the catalytically active domain of C2/4GnT. Further, the invention discloses methods of obtaining 1,6-N-acetyl glucosaminyl glycosylated saccharides, glycopeptides or glycoproteins by use of an enzymically active C2/4GnT protein or fusion protein thereof or by using cells stably transfected with a vector including DNA encoding an enzymatically active C2/4GnT protein as an expression system for recombinant production of such glycopeptides or glycoproteins. Also a method for the identification for the identification of DNA sequence variations in the C2/4GnT gene by isolating DNA from a patient, amplifying C2/4GnT-coding exons by PCR, and detecting the presence of DNA sequence variation are disclosed.

L16 ANSWER 7 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:410415 BIOSIS
DOCUMENT NUMBER: PREV200600413428
TITLE: Calcitonin protects against experimentially induced osteoarthritis.
AUTHOR(S): Sondergaard, B. C. [Reprint Author]; Henriksen, K.; Wulf, H.; Oestergaard, S.; Tanko, L. B.; Qvist, P.; Christiansen, C.; Karsdal, M. A.
SOURCE: Calcified Tissue International, (JAN 2006) Vol. 78, No. Suppl. 1, pp. S40.
Meeting Info.: 33rd European Symposium on Calcified Tissues. Prague, CZECH REPUBLIC. May 10 -14, 2006.
CODEN: CTINDZ. ISSN: 0171-967X.
DOCUMENT TYPE: Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 23 Aug 2006
Last Updated on STN: 23 Aug 2006

L16 ANSWER 8 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:220110 CAPLUS
DOCUMENT NUMBER: 142:285221
TITLE: Compositions for delivering parathyroid hormone and calcitonin containing N-(5-chlorosalicyloyl)-8-aminocaprylic acid for the treatment of osteoporosis
INVENTOR(S): Goldberg, Michael M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 10 pp., Cont. of U.S. Ser. No. 435,514, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2005054557	A1	20050310	US 2004-787857		20040225
PRIORITY APPLN. INFO.:			US 2002-379501P	P	20020509
			US 2003-435514	B1	20030509

OTHER SOURCE(S): CASREACT 142:285221; MARPAT 142:285221
AB The present invention relates to a composition comprising a delivery agent, parathyroid hormone, and calcitonin. This composition exhibits increased delivery of parathyroid hormone and/or calcitonin and is useful for the treatment of osteoporosis. The composition also permits simultaneous oral delivery of parathyroid hormone and calcitonin. The composition of the present invention may be formulated into a dosage unit form, such as an oral dosage unit form. The invention also provides a method for administering parathyroid hormone and calcitonin to an animal in need thereof by administering the composition of the present invention. Thus N-(5-chlorosalicyloyl)-8-aminocaprylic acid (5-CNAC) was synthesized in three steps starting from 5-chlorosalicylamide. The monosodium, and disodium salts of 5-CNAC were formed along with the ethanol solvate of disodium 5-CNAC. Capsules were filled, each contained (mg): 5-CNAC disodium salt ethanol solvate 226.28; parathyroid hormone 0.461; salmon calcitonin 0.411.

L16 ANSWER 9 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2005:172682 CAPLUS
DOCUMENT NUMBER: 142:222188
TITLE: High-Q Ultrasonic Determination of the Critical Nanoaggregate Concentration of Asphaltenes and the Critical Micelle Concentration of Standard Surfactants
AUTHOR(S): Andreatta, Gaeelle; Bostrom, Neil; Mullins, Oliver C.
CORPORATE SOURCE: Schlumberger-Doll Research, Ridgefield, CT, 06877, USA
SOURCE: Langmuir (2005), 21(7), 2728-2736
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Asphaltenes are known to be interfacially active in many circumstances such as at toluene-water interfaces. Furthermore, the term micelle has been used to describe the primary aggregation of asphaltenes in good solvents such as toluene. Nevertheless, there has been significant uncertainty regarding the critical micelle concentration (CMC) of asphaltenes and

even whether the micelle concept is appropriate for asphaltenes. To avoid semantic debates we introduce the terminol. critical nanoaggregate concentration (CNAC) for asphaltenes. In this report, we investigate asphaltenes and standard surfactants using high-Q, ultrasonic spectroscopy in both aqueous and organic solvents. As expected, standard surfactants are shown to exhibit a sharp break in sonic velocity vs. concentration at known CMCs. To prove our methods, we measured known surfactants with CMCs in the range from 0.010 g/L to 2.3 g/L in agreement with the literature. Using d. detns., we obtain micelle compressibilities consistent with previous literature reports. Asphaltenes are also shown to exhibit behavior similar to that of ultrasonic velocity vs. concentration as standard surfactants; asphaltene CNACs in toluene occur at roughly 0.1 g/L, although the exact concentration depends on the specific (crude oil) asphaltene. Furthermore, using asphaltene solution densities, we show that asphaltene nanoaggregate compressibilities are similar to micellar compressibilities obtained with standard nonionic surfactants in toluene. These results strongly support the contention that asphaltenes in toluene can be treated roughly within the micelle framework, although asphaltenes may exhibit small levels of aggregation (dimers, etc.) below their CNAC. Furthermore, our extensive results on known surfactants agree with the literature while the asphaltene CNACs reported here are one to two orders of magnitude lower than most previously published results. (Previous work utilized the terminol. "micelle" and "CMC" for asphaltenes.) We believe that the previously reported high concns. for asphaltene CMCs do not correspond to primary aggregation; perhaps they refer to higher levels of aggregation or perhaps to a particular surface structure.

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 10 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2006:93096 CAPLUS
DOCUMENT NUMBER: 145:78232
TITLE: Further extension of mammalian GATA-6
AUTHOR(S): Maeda, Masatomo; Ohashi, Kazuaki; Ohashi-Kobayashi, Ayako
CORPORATE SOURCE: Laboratory of Biochemistry and Molecular Biology, Graduate School of Pharmaceutical Sciences, Osaka University, Suita, Osaka, 565-0871, Japan
SOURCE: Development, Growth & Differentiation (2005), 47(9), 591-600
CODEN: DGDFA5; ISSN: 0012-1592
PUBLISHER: Blackwell Publishing Asia Pty Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Mammalian GATA-6, which has conserved tandem zinc fingers (CVNC-X17-CNAC)-X29-(CXNC-X17-CNAC), is essential for the development and specific gene regulation of the heart, gastrointestinal tract and other tissues. GATA-6 recognizes the (A/T/C)GAT(A/T)(A) sequence, and interacts with other transcriptional regulators through its zinc-finger region. The mRNA of GATA-6 uses 2 Met codons in frame as translational initiation codons, and produces L- and S-type GATA-6 through leaky ribosome scanning. GATA-6 is subjected to cAMP-dependent proteolysis by a proteasome in a heterologous expression system. These protein-based characteristics of GATA-6 will be helpful for the identification of target genes, together with determination of the in vivo binding sites for GATA-6 and understanding of the complex network of gene regulation mediated by GATA-6.

REFERENCE COUNT: 79 THERE ARE 79 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 11 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:154280 CAPLUS
DOCUMENT NUMBER: 138:210303
TITLE: 5-CNAC as oral delivery agent for parathyroid hormone fragments
INVENTOR(S): Azria, Moise; Bateman, Simon David
PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma G.m.b.H.
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003015822	A1	20030227	WO 2002-EP9181	20020816
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SE, SG, SI, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
CA 2453646	A1	20030227	CA 2002-2453646	20020816
AU 2002333443	A1	20030303	AU 2002-333443	20020816
EP 1420827	A1	20040526	EP 2002-794796	20020816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002011932	A	20041026	BR 2002-11932	20020816
CN 1543357	A	20041103	CN 2002-816084	20020816
HU 2004001441	A2	20041228	HU 2004-1441	20020816
JP 2005501852	T	20050120	JP 2003-520780	20020816
NZ 531018	A	20060331	NZ 2002-531018	20020816
ZA 2004000242	A	20041118	ZA 2004-242	20040113
NO 2004000598	A	20040210	NO 2004-598	20040210
MX 2004PA01418	A	20040527	MX 2004-PA1418	20040213
IN 2004CN00316	A	20070615	IN 2004-CN316	20040216
US 2004242478	A1	20041202	US 2004-484331	20040603
US 2006217313	A1	20060928	US 2006-443528	20060530
PRIORITY APPLN. INFO.:			US 2001-313048P P	20010817
			WO 2002-EP9181 W	20020816
			US 2004-484331 B1	20040603

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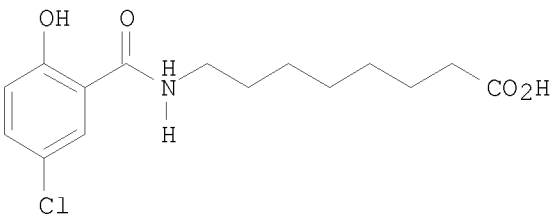

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AB Pharmaceutical compns. for the effective oral delivery of a parathyroid hormone, PTH, as well as methods for administration of the compns. are provided. Addnl., methods for stimulating new bone formation and treating

and/or preventing osteoporosis are also provided. Sep. capsules were prepared, one containing human PTH and the other I. I significantly facilitated the oral delivery of PTH.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 12 OF 49 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2003474762 EMBASE
TITLE: Determinants of GATA-1 binding to DNA: The role of non-finger residues.
AUTHOR: Ghirlando R.; Trainor C.D.
CORPORATE SOURCE: R. Ghirlando, NIDDK, National Institutes of Health, Dept. of Health and Human Services, Bethesda, MD 20892, United States. rodolfog@intra.niddk.nih.gov
SOURCE: Journal of Biological Chemistry, (14 Nov 2003) Vol. 278, No. 46, pp. 45620-45628.
Refs: 46
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical and Experimental Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 5 Jan 2004
Last Updated on STN: 5 Jan 2004
AB Mammalian GATA transcription factors are expressed in various tissues in a temporally regulated manner. The prototypic member, GATA-1, is required for normal erythroid, megakaryocytic, and mast cell development. This family of DNA-binding proteins recognizes a consensus (A/T)GATA(A/G) motif and possesses homologous DNA binding domains consisting of two zinc fingers. The C-terminal finger of GATA-1 recognizes the consensus motif with nanomolar affinities, whereas the N-terminal finger shows a binding preference for a GATC motif, albeit with much reduced affinity (K(d) ≈ μM). The N-terminal finger of GATA-2 also shows a preference for an AGATCT binding site, with an increased affinity attributed to N- and C-terminal flanking basic residues (Kd ≈ nM). To understand the differences in the binding specificities of the N- and C-terminal zinc fingers of GATA-1, we have constructed a series of swapped domain peptides. We show that the specificity for AGATAA over AGATCT arises from the C-terminal non-finger basic domain. Thus, the N-terminal finger binds preferentially to AGATAA once appended to the C-terminal arm of the C-terminal finger. We further show that this specificity arises from the highly conserved QTRNRK residues. The converse is, however, untrue in the case of the C-terminal finger; swapping of QTRNRK with the corresponding LVSKRA does not switch the DNA binding specificity from AGATAA to AGATCT. These results highlight the important role of residues adjacent to the CXXCX(17)CNAC zinc finger motif (i.e. non-finger residues) in the specific recognition of DNA residues.

L16 ANSWER 13 OF 49 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2003280425 EMBASE
TITLE: A new type of congenital disorders of glycosylation (CDG-Ii) provides new insights into the early steps of dolichol-linked oligosaccharide biosynthesis.
AUTHOR: Thiel C.; Schwarz M.; Peng J.; Grzmil M.; Hasilik M.; Braulkel T.; Kohlschutter A.; Von Figura K.; Lehle L.; Korner C.
CORPORATE SOURCE: C. Korner, Georg-August-Universitat Gottingen, Biochemie II, Heinrich-Duker-Weg 12, D-37073 Gottingen, Germany.

ckoerne@gwdg.de
SOURCE: Journal of Biological Chemistry, (20 Jun 2003) Vol. 278, No. 25, pp. 22498-22505.
Refs: 40
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 022 Human Genetics
029 Clinical and Experimental Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 10 Aug 2003
Last Updated on STN: 10 Aug 2003

AB Deficiency of GDP-Man:Man(1)cNAc(2)-PP-dolichol mannosyltransferase (hALG2), is the cause of a new type of congenital disorders of glycosylation (CDG) designated CDG-Ii. The patient presented normal at birth but developed in the 1st year of life a multisystemic disorder with mental retardation, seizures, coloboma of the iris, hypomyelination, hepatomegaly, and coagulation abnormalities. An accumulation of Man(1)GlcNAc(2)-PP-dolichol and Man(2)GlcNAc(2)-PP-dolichol was observed in skin fibroblasts of the patient. Incubation of patient fibroblast extracts with Man(1)GlcNAc(2)-PP-dolichol and GDP-mannose revealed a severely reduced activity of the mannosyltransferase elongating Man(1)GlcNAc(2)-PP dolichol. Because the Saccharomyces cerevisiae mutant alg2-1 was known to accumulate the same shortened dolichol-linked oligosaccharides as the patient, the yeast ALG2 sequence was used to identify the human ortholog. Genetic analysis revealed that the patient was heterozygous for a single nucleotide deletion and a single nucleotide substitution in the human ortholog of yeast ALG2. Expression of wild type but not of mutant hALG2 cDNA restored the mannosyltransferase activity and the biosynthesis of dolichol-linked oligosaccharides both in patient fibroblasts and in the alg2-1 yeast cells. hALG2 was shown to act as an α1,3-mannosyltransferase. The resulting Manα1,3-ManGlcNAc(2)-PP dolichol is further elongated by a yet unknown α1,6-mannosyltransferase.

L16 ANSWER 14 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:449533 CAPLUS
DOCUMENT NUMBER: 137:11016
TITLE: Pharmaceutical compositions for the oral delivery of pharmacologically active agents
INVENTOR(S): Ault, Joseph M.; Azria, Moise; Bateman, Simon David; Sikora, Joseph; Sparta, Gregory; Yang, Rebecca Fai-Ying; Xiao, Jie
PATENT ASSIGNEE(S): Novartis Ag, Switz.; Novartis-Erfindungen Verwaltungsgesellschaft M.B.H.
SOURCE: PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002045754	A2	20020613	WO 2001-EP14294	20011205
WO 2002045754	A3	20030103		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SE, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, YU, ZA, ZM, ZW

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

US 2002123459	A1	20020905	US 2001-6311		20011204
US 7049283	B2	20060523			
CA 2436599	A1	20020613	CA 2001-2436599		20011205
AU 200234547	A	20020618	AU 2002-34547		20011205
EP 1341526	A2	20030910	EP 2001-985368		20011205
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
BR 2001015965	A	20031028	BR 2001-15965		20011205
HU 2003002319	A2	20031128	HU 2003-2319		20011205
JP 2004515480	T	20040527	JP 2002-547536		20011205
NZ 526196	A	20050128	NZ 2001-526196		20011205
RU 2287999	C2	20061127	RU 2003-119545		20011205
ZA 2003004295	A	20040510	ZA 2003-4295		20030602
NO 2003002511	A	20030603	NO 2003-2511		20030603
MX 2003PA05096	A	20030905	MX 2003-PA5096		20030606
AU 2005202705	A1	20050714	AU 2005-202705		20050621
PRIORITY APPLN. INFO.:			US 2000-251729P	P	20001206
			AU 2002-234547	A3	20011205
			WO 2001-EP14294	W	20011205

AB Solid pharmaceutical compns. suitable for the oral delivery of pharmacol. active agents, e.g. peptides, comprising a therapeutically-effective amount of a pharmacol. active agent; a crospovidone or povidone; and a delivery agent for the pharmacol. active agent are disclosed. The compns. provide excellent oral bioavailability of pharmacol. active agents, particularly calcitonin. Salmon calcitonin, 5-CNAC disodium salt, and Crospovidone were combined, then Avicel PH102 and Mg stearate were added. The final blend was compressed to give tablets.

L16 ANSWER 15 OF 49 EMBASE DUPLICATE 3

ACCESSION NUMBER: 2003004740 EMBASE
TITLE: Anti-gal A/B, a novel anti-blood group antibody identified in recipients of ABO-incompatible kidney allografts.
AUTHOR: Galili U.; Ishida H.; Tanabe K.; Toma H.
CORPORATE SOURCE: Dr. U. Galili, Dept. Cardiovascular-Thoracic Surg., Rush University, 1653 West Congress Parkway, Chicago, IL 60612, United States. uri_galili@rush.edu
SOURCE: Transplantation, (15 Dec 2002) Vol. 74, No. 11, pp. 1574-1580.
Refs: 26
ISSN: 0041-1337 CODEN: TRPLAU
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
028 Urology and Nephrology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 16 Jan 2003
Last Updated on STN: 16 Jan 2003

AB Background. The most prevalent anticarbohydrate antibodies in human serum are anti-Gal interacting specifically with the α-gal epitope (Galα1-3Galβ1-4Gl- cNAc-R) and anti-blood group antibodies interacting with blood group A and B antigens. The α-gal epitope, although absent in humans, comprises part of the core of carbohydrate chain in A and B antigens. Therefore, it was of interest to determine whether immunoglobulin (Ig) G antibodies, elicited in patients rejecting ABO-incompatible kidney allografts, can interact with the α-gal epitope. Methods. Anti-A and anti-B antibodies were determined by enzyme-linked immunosorbent assay (ELISA) with blood group A

or B human red cell membranes, as solid phase antigens. Anti-Gal was determined by ELISA with α-gal-bovine serum albumin as solid-phase antigen. Specific removal of anti-Gal was performed by adsorption on fixed rabbit red cells. Results. Blood group O patients who underwent transplantation with either A or B kidney produced an antibody that bound to all three carbohydrate antigens. This multispecific antibody, designated anti-Gal A/B, is specific to the core α-gal epitope within A and B antigens. Recipients of allograft expressing incompatible blood group B also produce anti-Gal B antibody, which binds to the core α-gal epitope only in the B antigen. Anti-Gal A/B and anti-Gal B constitute most of the elicited anti-blood group antibody response. Allograft recipients also produced pure anti-A, or pure anti-B, which require the complete blood group structure for binding. Conclusions. The findings in this study imply that much of the immune response elicited by incompatible A or B antigens on kidney allografts results in activation of anti-Gal B-cell clones producing antibodies to the core α-gal epitope in these blood group antigens. Only less than 25% of the elicited antibodies interact with the complete A or B antigens (i.e., pure anti-A or pure anti-B). These findings suggest that prevention of the anti-Gal response may decrease the immune rejection of ABO-incompatible allografts.

L16 ANSWER 16 OF 49 EMBASE

ACCESSION NUMBER: 2002378933 EMBASE

TITLE: The effect of glucose on the potency of two distinct glycogen phosphorylase inhibitors.

AUTHOR: Andersen B.; Westergaard N.

CORPORATE SOURCE: B. Andersen, Department of Hepatic Biochemistry, Novo Nordisk A/S, Novo Nordisk Park, Dk-2760 Malov, Denmark. Btta@novonordisk.com

SOURCE: Biochemical Journal, (15 Oct 2002) Vol. 367, No. 2, pp. 443-450.
Refs: 28
ISSN: 0264-6021 CODEN: BIJOAK

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical and Experimental Biochemistry
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 7 Nov 2002
Last Updated on STN: 7 Nov 2002

AB Two distinct glycogen phosphorylase inhibitors, 5-chloro-1H-indole-2-carboxylic acid [1-(4-fluorobenzyl)-2-(4-hydroxypiperidin-1-yl)-2-oxoethyl]amide (CP-320,626) and 1,4-dideoxy-1,4-D-arabinitol (DAB), were characterized in vitro with respect to the influence of glucose on their potencies. CP-320,626 has previously been shown to bind to a newly characterized indole site, whereas DAB seems to act as a glucose analogue, but with slightly different properties from those of glucose. When analysed in pig liver glycogen phosphorylase a (GPa) activity assays, the two inhibitors showed very different properties. When GPa activity was measured in the physiological direction (glycogenolysis), DAB was the most potent inhibitor with an IC(50) value of 740 ± 9 nM compared with the IC(50) value for CP-320-626 of 2.39 ± 0.37 μM. There was no effect of glucose on the inhibitory properties of DAB, whereas a glucose analogue N-acetyl-β-D-glucopyranosylamine (1-GlcNAc) antagonized the effect of DAB. Likewise, there was no synergistic effect of CP-320,626 and glucose, whereas CP-320,626 and 1-GlcNAc inhibited GPa in synergy. Moreover, the synergistic effect of glucose and CP-320,626 was GPa-isoform-specific, since CP-320,626 and glucose inhibited rabbit muscle GPa in synergy when the GPa activity was measured towards glycogenolysis. When GPa activity was measured towards glycogen synthesis, CP-320,626 showed a synergistic

effect with glucose, whereas the effect of DAB was slightly antagonized by glucose in this assay direction. Caffeine was included in the investigation as a control GP inhibitor, and both glucose and 1-G1cNAc potentiated the effect of caffeine independent of the assay direction. In primary cultured rat hepatocytes 1-G1-cNAc and CP-320,626 inhibited basal and glucagon-induced glycogenolysis in synergy, whereas the ability of DAB to inhibit basal or glucagon-induced glycogenolysis was unaltered by 1-G1cNAc. Glucose had no effect on either CP-320,626 or DAB inhibition of glycogenolysis in cultured rat hepatocytes. In conclusion, the present study shows that the two GP inhibitors are kinetically very distinct and neither of the inhibitors demonstrates a physiologically relevant glucose dependence in vitro.

L16 ANSWER 17 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:725594 CAPLUS
DOCUMENT NUMBER: 133:301181
TITLE: Disodium salts, monohydrates, and ethanol solvates of salicylamide derivatives for drug delivery
INVENTOR(S): Bay, William E.; Agarwal, Rajesh K.; Chaudhary, Kiran; Majuru, Shingai; Goldberg, Michael M.; Russo, Joanne P.
PATENT ASSIGNEE(S): Emisphere Technologies, Inc., USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000059863	A1	20001012	WO 2000-US9390	20000405
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2369591	A1	20001012	CA 2000-2369591	20000405
CA 2487952	A1	20001012	CA 2000-2487952	20000405
EP 1175390	A1	20020130	EP 2000-921909	20000405
EP 1175390	B1	20050202		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002541132	T	20021203	JP 2000-609376	20000405
AT 288415	T	20050215	AT 2000-921909	20000405
EP 1535625	A1	20050601	EP 2005-1956	20000405
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
ES 2235854	T3	20050716	ES 2000-921909	20000405
NZ 534409	A	20060331	NZ 2000-534409	20000405
NZ 535896	A	20060630	NZ 2000-535896	20000405
US 2002065255	A1	20020530	US 2001-962794	20010924
HK 1045680	A1	20050812	HK 2002-105618	20020730
US 2004106825	A1	20040603	US 2003-615213	20030707
AU 2004201690	A1	20040520	AU 2004-201690	20040422
JP 2005068161	A	20050317	JP 2004-325632	20041109
AU 2005200367	A1	20050217	AU 2005-200367	20050131
PRIORITY APPLN. INFO.:			US 1999-127754P P	19990405
			US 2000-186142P P	20000301

US 2000-186143P	P	20000301
US 2000-191286P	P	20000321
AU 2000-42167	A3	20000405
CA 2000-2369591	A3	20000405
EP 2000-921909	A3	20000405
JP 2000-609376	A3	20000405
NZ 2000-534409	A1	20000405
WO 2000-US9390	W	20000405
US 2001-962794	B1	20010924
AU 2004-201690	A3	20040422

OTHER SOURCE(S): MARPAT 133:301181

AB The disodium salts as well as their hydrates and ethanol solvates of certain delivery agents have surprisingly greater efficacy for delivering active agents than the corresponding monosodium salt. The delivery agents are salicylamide derivs. and the hydrates and solvates also have surprisingly greater efficacy for delivering active agents, such as heparin and calcitonin, than their corresponding monosodium salts and free acids. Preferred delivery agents include, but are not limited to, N-(5-chlorosalicyloyl)-8-aminocaprylic acid (5-CNAC), N-(10-[2-hydroxybenzoyl]amino)decanoic acid (SNAD), and sodium N-(8-[2-hydroxybenzoyl]amino)caprylate (SNAC) which were synthesized.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 18 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:253021 BIOSIS
DOCUMENT NUMBER: PREV200100253021
TITLE: Inhibitors of UDP-G1cNAc:Ga1beta1-3Ga1NAcalphaR beta1-6 N-acetylglucosaminyltransferase (core 2 G1cNAc-T) and use of the inhibitors to prevent or treat cardiomyopathy associated with diabetes.
AUTHOR(S): King, George L. [Inventor, Reprint author]; Nishio, Yoshihiko [Inventor]; Koya, Daisuke [Inventor]; Dennis, James W. [Inventor]; Warren, Charles E. [Inventor]
CORPORATE SOURCE: 101 Centre St., Dover, MA, 02030, USA
PATENT INFORMATION: US 6131578 20001017
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Oct. 17, 2000) Vol. 1239, No. 3. e-file. CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 23 May 2001
Last Updated on STN: 19 Feb 2002

AB Cardiomyopathy associated with diabetes and hyperglycemia can be treated by administering to a subject suffering from this condition a substance that inhibits UDP-GlcNAc:Galbeta1-3GalNAcalphaRbeta1-6-N-acetylglucosaminyl transferase (core 2 GlcNAc-T) activity.

L16 ANSWER 19 OF 49 MEDLINE on STN

ACCESSION NUMBER: 2001061977 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11042394
TITLE: Functional expression and genomic structure of human N-acetylglucosamine-6-O-sulfotransferase that transfers sulfate to beta-N-acetylglucosamine at the nonreducing end of an N-acetyllactosamine sequence.
AUTHOR: Sakaguchi H; Kitagawa H; Sugahara K
CORPORATE SOURCE: Department of Biochemistry, Kobe Pharmaceutical University, Higashinada-ku, 658-8558, Kobe, Japan.
SOURCE: Biochimica et biophysica acta, (2000 Oct 18) Vol. 1523, No. 2-3, pp. 269-76.
Journal code: 0217513. ISSN: 0006-3002.

PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AB021124; GENBANK-AB021125
ENTRY MONTH: 200012
ENTRY DATE: Entered STN: 22 Mar 2001
Last Updated on STN: 11 Dec 2002
Entered Medline: 28 Dec 2000

AB The cDNA and gene encoding human N-acetylglucosamine-6-O-sulfotransferase (Gn6ST) have been cloned. Comparative analysis of this cDNA with the mouse Gn6ST sequence indicates 96% amino acid identity between the two sequences. The expression of a soluble recombinant form of the protein in COS-1 cells produced an active sulfotransferase, which transferred sulfate to the terminal GlcNAc in GlcNAcbeta1-O-CH(3), GlcNAcbeta1-3Galbeta1-O-CH(3) and GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1-3Galbeta1-4Gl cNAc but not in GlcNAcalpha1-4GlcAbeta1-3Galbeta1-3Galbeta1-4 Xylbeta1-O-Ser. In addition, neither Galbeta1-4GlcNAcbeta1-O-naphthalenemethanol nor GalNAcbeta1-4GlcAbeta1-3Galbeta1-3Galbeta1-4X ylbeta1-O-Ser were utilized as acceptors. These findings indicate that a terminal beta-linked GlcNAc residue is necessary for acceptor substrates of Gn6ST. The human Gn6ST gene spans about 7 kb, consists of two exons and exhibits an intron-less coding region.

L16 ANSWER 20 OF 49 MEDLINE on STN
ACCESSION NUMBER: 2000111108 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10642612
TITLE: Sulfation of sialyl N-acetyllactosamine oligosaccharides and fetuin oligosaccharides by keratan sulfate Gal-6-sulfotransferase.
AUTHOR: Torii T; Fukuta M; Habuchi O
CORPORATE SOURCE: Department of Life Science, Aichi University of Education, Igaya-cho, Kariya, Aichi 448-8542, Japan.
SOURCE: Glycobiology, (2000 Feb) Vol. 10, No. 2, pp. 203-11.
Journal code: 9104124. ISSN: 0959-6658.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 27 Mar 2000
Last Updated on STN: 27 Mar 2000
Entered Medline: 13 Mar 2000

AB We have previously cloned keratan sulfate Gal-6-sulfotransferase (KSGal6ST), which transfers sulfate from 3'-phosphoadenosine 5'-phosphosulfate to position 6 of Gal residue of keratan sulfate. In this study, we examined whether KSGal6ST could transfer sulfate to sialyl N -acetyllactosamine oligosaccharides or fetuin oligo-saccharides. KSGal6ST expressed in COS-7 cells catalyzed transfer of sulfate to NeuAcalpha2-3Galbeta1-4GlcNAc (3'SLN), NeuAcalpha2-3Galbeta1-4GlcNAcbeta1-3Galbeta1-4Gl cNAc (SL1L1), NeuAcalpha2-3Galbeta1-4(6-sulfo)GlcNAcbeta1-3(6-sulfo) Galbeta1-4(6-su lfo)GlcNAc (SL2L4), and their desialylated derivatives except for Galbeta1-4GlcNAc, but not to NeuAcalpha2-3Galbeta1-4(Fucalpha1-3)GlcNAc (SLex). When the sulfated product formed from 3'SLN was degraded with neuraminidase and reduced with NaBH(4), the resulting sulfated disaccharide alditol showed the same retention time in SAX-HPLC as that of [(3)H]Gal(6SO(4))beta1-4GlcNAc-ol. KSGal6ST also catalyzed sulfation of fetuin. When the sulfated oligosaccharides released from the sulfated fetuin after sequential digestion with proteinase and neuraminidase were subjected to a reaction

sequence of hydrazin-olysis, deaminative cleavage and NaBH(4)reduction, the major product was co-eluted with [(3)H]Gal(6SO(4))beta1-4anhydromannitol in SAX-HPLC. These observations show that KSGal6ST is able to sulfate position 6 of Gal residue of 3'SLN and fetuin oligosaccharides. The relative rates of the sulfation of SL2L4 was much higher than the rate of the sulfation of keratan sulfate. These results suggest that KSGal6ST may function in the sulfation of sialyl N -acetyllactosamine oligosaccharide chains attached to glycoproteins.

L16 ANSWER 21 OF 49 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN DUPLICATE 4

ACCESSION NUMBER: 1999045673 EMBASE
TITLE: All accessible epitopes in the Salmonella lipopolysaccharide core are associated with branch residues.
AUTHOR: Nnalue N.A.
CORPORATE SOURCE: N.A. Nnalue, Tonna Bioservices and Consulting, 8813 Allman Rd., Lenexa, KS 66219, United States. nnnalue@nctscape.net
SOURCE: Infection and Immunity, (1999) Vol. 67, No. 2, pp. 998-1003.
Refs: 38
ISSN: 0019-9567 CODEN: INFIBR
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 4 Mar 1999
Last Updated on STN: 4 Mar 1999

AB Antisera generated against each of the nine known chemotypes of Salmonella lipopolysaccharide (LPS) core were characterized in order to delineate cross-reactive epitopes and define the bases for their accessibility. Strongly cross-reactive epitopes were associated with three chemotypes: Ra and Rb(4), which recognized α-Gl- cNAc-1→2-α-Glc, and Rd(1), which recognized L-α-D-heptose-1→7-L-α-D-heptose. Both these disaccharides and the more weakly cross-reactive α-Gal-1→6-α-Glc terminal in Rb(3) LPS represent branch points along the core oligosaccharide. Therefore, branch points in endotoxin core oligosaccharides may generally be cross-reactive.

L16 ANSWER 22 OF 49 MEDLINE on STN

ACCESSION NUMBER: 1999225381 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10207184
TITLE: Isolation and characterization of linear polylactosamines containing one and two site-specifically positioned Lewis x determinants: WGA agarose chromatography in fractionation of mixtures generated by random, partial enzymatic alpha3-fucosylation of pure polylactosamines.
AUTHOR: Niemela R; Natunen J; Penttila L; Salminen H; Helin J; Maaheimo H; Costello C E; Renkonen O
CORPORATE SOURCE: Institute of Biotechnology, University of Helsinki and Department of Bioscience, University of Helsinki, P.O. Box 56, FIN-00014 Helsinki, Finland.
CONTRACT NUMBER: RR10888 (NCRR)
SOURCE: Glycobiology, (1999 May) Vol. 9, No. 5, pp. 517-26.
Journal code: 9104124. ISSN: 0959-6658.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: (IN VITRO)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
ENTRY DATE: Entered STN: 18 Jun 1999
Last Updated on STN: 18 Jun 1999
Entered Medline: 7 Jun 1999

AB We report that isomeric monofucosylhexasaccharides, Galbeta1-4GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1- 3Galbeta1-4(Fucalpha1-3) GlcNAc, Galbeta1-4GlcNAcbeta1-3Galbeta1-4(Fucalpha1-3) GlcNAcbeta1-3Galbeta1-4 GlcNAc and Galbeta1-4(Fucalpha1-3)GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1-3Galbeta1-4 GlcNAc, and bifucosylhexasaccharides Galbeta1-4GlcNAcbeta1-3Galbeta1-4(Fucalpha1-3) GlcNAcbeta1-3Galbeta1-4(Fucalpha1-3)GlcNAc, Galbeta1-4(Fucalpha1-3)GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1-3Galbeta1-4 (Fucalpha1-3)GlcNAc and Galbeta1-4(Fucalpha1-3)GlcNAcbeta1-3Galbeta1-4(Fucalpha1-3)GlcNAcbeta1-3Galbeta1-4GlcNAc can be isolated in pure form from reaction mixtures of the linear hexasaccharide Galbeta1-4GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1-3Galbeta1-4GlcNAc with GDP-fucose and alpha1,3-fucosyltransferases of human milk. The pure isomers were characterized in several ways;1H-NMR spectroscopy, for instance, revealed distinct resonances associated with the Lewis x group [Galbeta1-4(Fucalpha1-3)GlcNAc] located at the proximal, middle, and distal positions of the polylactosamine chain. Chromatography on immobilized wheat germ agglutinin was crucial in the separation process used; the isomers carrying the fucose at the reducing end GlcNAc possessed particularly low affinities for the lectin. Isomeric monofucosyl derivatives of the pentasaccharides GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1-3Galbeta1- 4Gl cNAc and Galalpha1-3Galbeta1-4GlcNAcbeta1-3Galbeta1-4G lcN Ac and the tetrasaccharide Galbeta1-4GlcNAcbeta1-3Galbeta1-4GlcNAc were also obtained in pure form, implying that the methods used are widely applicable. The isomeric Lewis x glycans proved to be recognized in highly variable binding modes by polylactosamine-metabolizing enzymes, e.g., the midchain beta1,6-GlcNAc transferase (Leppanen et al., Biochemistry, 36, 13729-13735, 1997).

L16 ANSWER 23 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:70469 CAPLUS
DOCUMENT NUMBER: 130:158135
TITLE: Determination of cyanides in electroplating solutions as Ni(CN)42- and analysis by capillary electrophoresis
AUTHOR(S): Aguilar, Manuel; Farran, Adriana; Marti, Vicenc
CORPORATE SOURCE: Chemical Engineering Department, E.T.S.E.I.B.-U.P.C., Barcelona, E-08028, Spain
SOURCE: Fresenius' Journal of Analytical Chemistry (1999), 363(1), 121-123
CODEN: FJACES; ISSN: 0937-0633
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A CE method was developed for the determination of total (free and weakly bound) CN- in electroplating solns. based on the use of a cationic surfactant (TTAB) and complexation with Ni(II)-NH3 solns. to Ni(CN)42-. Both direct complexation and CN- distillation combined with complexation were tested. Under optimized conditions, this method is time-saving compared to standard methods. Total CN- determined by CE had detection limits (with respect to the initial sample concentration) of 0.5 μg/mL for direct complexation and 50 ng/mL for distillation combined with complexation. Total CN- and CN- not amenable by chlorination (CNAC) were determined in real samples from spent electroplating baths.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 24 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 1998:74274 CAPLUS
DOCUMENT NUMBER: 128:240970
TITLE: A major common trisulfated hexasaccharide core sequence, hexuronic acid(2-sulfate)-glucosamine(N-sulfate)-iduronic acid-N-acetylglucosamine-glucuronic acid-glucosamine(N-sulfate), isolated from the low sulfated irregular region of porcine intestinal heparin
AUTHOR(S): Yamada, Shuhei; Yamane, Yukari; Tsuda, Hiromi; Yoshida, Keiichi; Sugahara, Kazuyuki
CORPORATE SOURCE: Department of Biochemistry, Kobe Pharmaceutical University, Kobe, 658, Japan
SOURCE: Journal of Biological Chemistry (1998), 273(4), 1863-1871
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The major structure of the low sulfated irregular region of porcine intestinal heparin was investigated by characterizing the hexasaccharide fraction prepared by extensive digestion of the highly sulfated region with Flavobacterium heparinase and subsequent size fractionation by gel chromatog. Structures of a tetrasaccharide, a pentasaccharide, and eight hexasaccharide components in this fraction, which accounted for approx. 19% (weight/weight) of the starting heparin representing the major oligosaccharide fraction derived from the irregular region, were determined by chemical and enzymic analyses as well as 1H NMR spectroscopy. Five compds. including one penta- and four hexasaccharides had hitherto unreported structures. The structure of the pentasaccharide with a glucuronic acid at the reducing terminus was assumed to be derived from the reducing terminus of a heparin glycosaminoglycan chain and may represent the reducing terminus exposed by a tissue endo-β-glucuronidase involved in the intracellular post-synthetic fragmentation of macromol. heparin. Eight out of the 10 isolated oligosaccharides shared the trisaccharide sequence, -4IdceAα1-4Glc-NAcα1-4GlcAβ1-, and its reverse sequence, -4GlcAβ1-4GlcNAcα1-4IdceAα1-, was not found. The latter has not been reported to date for heparin/heparan sulfate, indicating the substrate specificity of the D-glucuronyl C-5 epimerase. Furthermore, seven hexasaccharides shared the common trisulfated hexasaccharide core sequence ΔHexA(2-sulfate)α1-4GlcN(N-sulfate)α1-4IdceAα1-4Gl- cNAc.alpha.1-4GlcAβ1-4GlcN(N-sulfate) which contained the above trisaccharide sequence (ΔHexA, IdceA, GlcN, and GlcA represent 4-deoxy-α-L-threo-hex-4-enepyranosyluronic acid, L-iduronic acid, D-glucosamine, and D-glucuronic acid, resp.) and addnl. sulfate groups. The specificity of the heparinase used for preparation of the oligosaccharides indicates the occurrence of the common pentasulfated octasaccharide core sequence, -4GcN(N-sulfate)α1-4HexA(2-sulfate)1-4 GlcN(N-sulfate)α1-4IdceAα1-4GlcNAcα1-4GlcAβ1-4 GlcN(N-sulfate)α1-4HexA(2-sulfate)1-, where the central hexasaccharide is flanked by GlcN(N-sulfate) and HexA(2-sulfate) on the nonreducing and reducing sides, resp. The revealed common sequence consisted a low sulfated trisaccharide representing the irregular region sandwiched by highly sulfated regions and should reflect the control mechanism of heparin biosynthesis.
REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 25 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 1998:471050 CAPLUS

DOCUMENT NUMBER: 129:244060
TITLE: Porcine cartilage transplants in the cynomolgus monkey. III. Transplantation of α-galactosidase-treated porcine cartilage
AUTHOR(S): Stone, Kevin R.; Ayala, Gustavo; Goldstein, Jack; Hurst, Rose; Walgenbach, Ann; Galili, Uri
CORPORATE SOURCE: The Stone Clinic, San Francisco, CA, USA
SOURCE: Transplantation (1998), 65(12), 1577-1583
CODEN: TRPLAU; ISSN: 0041-1337
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Studies on transplantation of porcine meniscus and articular cartilage into monkeys are important for evaluating the possible use of such tissues in humans. In addition, such studies shed light on the chronic xenograft rejection process in primates. Transplantation of porcine cartilage into cynomolgus monkeys for 2 mo results in a many-fold increase in anti-Gal activity and in a strong cellular inflammatory response of T lymphocytes and macrophages within the implants. The objective of this study was to determine whether elimination of Galα1-3Galβ1-4GI- cNAc-R (α-gal epitopes) from the xenograft may alter the immune response and the inflammatory reaction. Porcine meniscus and articular cartilage specimens were treated with recombinant α-galactosidase (100 U/mL), and the absence of α-gal epitopes was assessed by the binding of the monoclonal anti-Gal antibody M86. The treated cartilage specimens were transplanted into the suprapatellar pouch of cynomolgus monkeys. The immune response to cartilage was monitored in the serum and the inflammatory reaction was assessed in the xenografts, which were explanted after 2 mo. Incubation with α-galactosidase resulted in complete removal of α-gal epitopes from the cartilage. The increase in anti-Gal activity in the transplanted monkeys was marginal. However, most monkeys produced antibodies to antigens specific to porcine cartilage. The inflammatory response within the α-galactosidase-treated xenografts was much lower than in nontreated cartilage and the proportion of T lymphocytes within the cellular infiltrates was greatly reduced. Treatment of cartilage xenografts with α-galactosidase successfully removes α-gal epitopes from porcine cartilage. Transplantation of the treated cartilage results in the production of only anti-porcine cartilage-specific antibodies and a reduced inflammatory response consisting primarily of macrophages infiltrating into the cartilage.
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 26 OF 49 MEDLINE on STN
ACCESSION NUMBER: 1998391845 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9722682
TITLE: Human N-acetylglucosamine-6-O-sulfotransferase involved in the biosynthesis of 6-sulfo sialyl Lewis X: molecular cloning, chromosomal mapping, and expression in various organs and tumor cells.
AUTHOR: Uchimura K; Muramatsu H; Kaname T; Ogawa H; Yamakawa T; Fan Q W; Mitsuoka C; Kannagi R; Habuchi O; Yokoyama I; Yamamura K; Ozaki T; Nakagawara A; Kadomatsu K; Muramatsu T
CORPORATE SOURCE: Departments of Biochemistry, Nagoya University School of Medicine, Showa-ku, Nagoya, 466-8550, Japan.
SOURCE: Journal of biochemistry, (1998 Sep) Vol. 124, No. 3, pp. 670-8.
Journal code: 0376600. ISSN: 0021-924X.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English

FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AB014679; GENBANK-AB014680
ENTRY MONTH: 199812
ENTRY DATE: Entered STN: 15 Jan 1999
Last Updated on STN: 10 Dec 2002
Entered Medline: 11 Dec 1998

AB N-Acetylglucosamine-6-O-sulfotransferase catalyzes the transfer of sulfate from 3'-phosphoadenosine 5'-phosphosulfate to position 6 of a non-reducing N-acetylglucosamine (GlcNAc) residue. We have cloned human GlcNAc-6-O-sulfotransferase cDNA, based on the sequence homology to cloned cDNA of mouse GlcNAc-6-O-sulfotransferase. The predicted protein sequence of the human enzyme was highly homologous to that of the mouse enzyme; in the 363 amino acid stretch of the catalytic region, the two proteins were nearly identical except for conservative changes in 3 amino acid residues. The expressed enzyme transferred sulfate to GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1-3Galbeta1-4Gl cNAc. Co-transfection of the enzyme cDNA and fucosyltransferase VII cDNA into COS-7 cells resulted in cell surface expression of 6-sulfo sialyl Lewis X. Fluorescence in situ hybridization analysis revealed that the GlcNAc-6-O-sulfotransferase gene is located on human chromosome 7q31. mRNA of the human enzyme was strongly expressed in the bone marrow, peripheral blood leukocytes, spleen, brain, spinal cord, ovary, and placenta, and moderate levels of expression were observed in many organs including lymph nodes and thymus. In situ hybridization with the mouse system showed that the transcript was localized in specific regions of the brain, i.e. pyramidal cells in the CA3 subregion of the hippocampus, cerebellar nucleus and Purkinje cells. Among human tumor cells, strong expression of the mRNA was found in MOLT-4 and Jarkat lymphoblastic leukemia cells, Raji lymphoma cells, K-562 chronic myelogeneous leukemia cells, U251 glioma cells, and G361 melanoma cells. Carbohydrate structures synthesized by the sulfotransferase may be involved in various aspects of the differentiation and behavior of blood cells, their progenitor cells, and neurons in the central nervous system.

L16 ANSWER 27 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:255377 BIOSIS
DOCUMENT NUMBER: PREV199800255377
TITLE: Acceptor specificity of the human leukocyte alpha3 fucosyltransferase: Role of FucT-VII in the generation of selectin ligands.
AUTHOR(S): Britten, Christopher J. [Reprint author]; Van Den Eijnden, Dirk H.; McDowell, William; Kelly, Valerie A.; Witham, Sara J.; Edbrooke, Mark R.; Bird, Michael I.; De Vries, Theodora; Smithers, Nicholas
CORPORATE SOURCE: Glycobiol. Res. Unit, GlaxoWellcome Res. and Dev. Ltd., Med. Res. Cent., Stevenage, Herts. SG1 2NY, UK
SOURCE: Glycobiology, (April, 1998) Vol. 8, No. 4, pp. 321-327. print.
ISSN: 0959-6658.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jun 1998
Last Updated on STN: 9 Jun 1998

AB The alpha3 fucosyltransferase, FucT-VII, is one of the key glycosyltransferases involved in the biosynthesis of the sialyl Lewis X (sLex) antigen on human leukocytes. The sialyl Lewis X antigen (NeuAcalpha(2-3)Galbeta(1-4)(Fucalpha(1-3))GlcNAc-R) is an essential component of the recruitment of leukocytes to sites of inflammation, mediating the primary interaction between circulating leukocytes and activated endothelium. In order to characterize the enzymatic properties of the leukocyte alpha3 fucosyltransferase FucT-VII, the enzyme has been expressed in Trichoplusia ni insect cells. The enzyme is capable of

synthesizing both sLex and sialyl-dimeric-Lex structures in vitro, from 3'-sialyl-lacNAc and VIM-2 structures, respectively, with only low levels of fucose transfer observed to neutral or 3'-sulfated acceptors. Studies using fucosylated NeuAcalpha(2-3)-(Galp(1-4)G)cNAC)3-Me acceptors demonstrate that FucT-VII is able to synthesize both di-fucosylated and trifucosylated structures from mono-fucosylated precursors, but preferentially fucosylates the distal GlcNAc within a polylactosamine chain. Furthermore, the rate of fucosylation of the internal GlcNAc residues is reduced once fucose has been added to the distal GlcNAc. These results indicate that FucT-VII is capable of generating complex selectin ligands, in vitro, however the order of fucose addition to the lactosamine chain affects the rate of selectin ligand synthesis.

L16 ANSWER 28 OF 49 MEDLINE on STN
ACCESSION NUMBER: 1998022769 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9354644
TITLE: Enzymatic midchain branching of polylactosamine backbones is restricted in a site-specific manner in alpha 1,3-fucosylated chains.
AUTHOR: Leppanen A; Niemela R; Renkonen O
CORPORATE SOURCE: Institute of Biotechnology, Department of Biosciences (Division of Biochemistry), University of Helsinki, Finland.
SOURCE: Biochemistry, (1997 Nov 4) Vol. 36, No. 44, pp. 13729-35. Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199712
ENTRY DATE: Entered STN: 9 Jan 1998
Last Updated on STN: 9 Jan 1998
Entered Medline: 4 Dec 1997

AB Branched polylactosamines on animal cell surfaces are believed to contribute to multivalent interactions in cell adhesion and cell signalling. Their biosynthesis proceeds via linear precursors that become branched by beta1,6-GlcNAc transferases (IGnT6, GlcNAc to Gal). Previous work has identified the tetrasaccharide Galbeta1-4GlcNAcbeta1-3Galbeta1-4GlcNAc (1) and the hexasaccharide Galbeta1-4GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1- 3Galbeta1-4GlcNAc (4) as acceptors for a rat serum enzyme activity (cIGnT6), which transfers GlcNAcbeta1-6 units to the midchain galactose residues. Thereby, 1 is converted to the branched pentasaccharide Galbeta1-4GlcNAcbeta1-3(GlcNAcbeta1-6)Galbeta1-4 GlcNAc and 4 to the doubly branched octasaccharide Galbeta1-4GlcNAcbeta1-3(GlcNAcbeta1-6)Galbeta1-+ ++4GlcNAcbeta1-3(GlcNAcb eta1-6)Galbeta1-4GlcNAc [Leppanen, A., Salminen, H., Zhu, Y., Maaheimo, H., Helin, J., Costello, C. E., & Renkonen, O. (1997) Biochemistry 36, 7026-7036]. Here we report that neither the alpha1, 3-fucose-containing derivatives of 1 [Galbeta1-4GlcNAcbeta1-3Galbeta1-4(Fucalpha1-3)G lcNAc and Galbeta1-4(Fucalpha1-3)GlcNAcbeta1-3Galbeta1-4Gl cNAc] nor a similar derivative of 4 [Galbeta1-4GlcNAcbeta1-3Galbeta1-4(Fucalpha1-3)+ ++GlcNAcbeta1-3Galbeta1- 4GlcNAc] were acceptors for the rat serum cIGnT6 activity. Hence, the enzyme's branch-forming action was completely prevented at sites in the immediate neighborhood of the fucosylated loci of the polylactosamines. In Galbeta1-4GlcNAcbeta1-3Galbeta1-4GlcNAcbeta1-3Galbeta1-4(Fucalpha1-3) GlcNAc, the inhibition of the branch-forming reaction was restricted to the fucose-carrying LacNAc unit; at the middle LacNAc, the branching proceeded normally. However, in the isomeric Galbeta1-4(Fucalpha1-3)GlcNAcbeta1-3Galbeta1- 4GlcNAcbeta1-3Galbeta1-4 GlcNAc, the fucose residue prevented branching completely at the middle

LacNAc and almost completely at the reducing end LacNAc. In summary, alpha1,3-fucose residues in polylactosamine chains inhibited the cIGnT6 reaction in a site-specific manner, at the fucosylated LacNAc unit itself and also at sites one and two LacNAc units upstream, but not at the LacNAc units downstream from the fucosylated locus. These data imply that site-directed branching in polylactosamines is possible in vitro with the aid of specifically positioned alpha1,3-fucosyl units, that can be removed afterward without harming the branched backbones.

L16 ANSWER 29 OF 49 EMBASE

ACCESSION NUMBER: 1997048603 EMBASE

TITLE: Prenatal alcohol exposure affects galactosyltransferase activity and glycoconjugates in the Golgi apparatus of fetal rat hepatocytes.

AUTHOR: Renau-Piqueras J.; Guasch R.; Azorin I.; Segui J.-M.; Guerri C.

CORPORATE SOURCE: Dr. J. Renau-Piqueras, Centro de Investigacion, Hospital La Fe, Avda. Campanar 21, Valencia, Spain

SOURCE: Hepatology, (Feb 1997) Vol. 25, No. 2, pp. 343-350.
Refs: 69
ISSN: 0270-9139 CODEN: HPTLD9

COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical and Experimental Biochemistry
048 Gastroenterology
005 General Pathology and Pathological Anatomy
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 3 Mar 1997
Last Updated on STN: 3 Mar 1997

AB Prenatal exposure to alcohol affects the morphological, structural, and functional features of the Golgi apparatus (GA), thus altering the glycosylation process in fetal hepatocytes. To elucidate the cellular mechanisms underlying these alterations, we have studied the effect of alcohol exposure in utero on the activity of liver galactosyltransferase, an enzyme involved in the glycosylation process, and on the hepatic glycoprotein sugar composition. For this, livers from 21-day-old fetuses obtained from control and ethanol-fed rats were used. Galactosyltransferase (GT) activity was determined in isolated GA cis and trans fractions. Colloidal gold- labeled lectin cytochemistry was used to analyze sugar residues in hepatocytes at the subcellular level. Finally, the integrity of the GA after alcohol treatment was assessed by electron microscopy and by evaluating the distribution of the Golgi β-COP, a protein involved in vesicular trafficking. Prenatal alcohol exposure induces a significant increase in both liver weight and total protein content in the trans Golgi. Moreover, this treatment decreases the activity of galactosyltransferase, increases α-L- Fuc residues, and reduces the number of α-Man, GlcNAc(β1,4,Gl- cNAc)(1,2), GalNAcα1,3GalNAc, α-GalNAc, and α-Gal residues. Alcohol exposure also causes the Golgi cisternae to disappear in about 30% of the hepatocytes, and reduces 75% the number of anti-Golgi β-COP protein binding sites. Our results suggest that the decrease in galactosyltransferase activity, the alterations in the oligosaccharide chain composition, and the reduction in the amount of Golgi β-COP protein could be involved in the alterations in the glycosylation process, as well as in the accumulation of hepatic proteins observed after prenatal alcohol exposure. These alterations could contribute, therefore, to the alcohol-induced injury in the developing liver.

L16 ANSWER 30 OF 49 BIOSIS

ACCESSION NUMBER: 1997:199418 BIOSIS
DOCUMENT NUMBER: PREV199799498621
TITLE: Characterization of lactoferrin-binding proteins of human macrophage membrane: Multiple species of lactoferrin-binding proteins with polylactosamine-binding ability.
AUTHOR(S): Eda, Shigetoshi; Kikugawa, Kiyomi [Reprint author]; Beppu, Masatoshi
CORPORATE SOURCE: Sch. Pharm., Tokyo Univ. Pharm. Life Sci., 1432-1 Horinouchi, Hachioji, Tokyo 192-03, Japan
SOURCE: Biological and Pharmaceutical Bulletin, (1997) Vol. 20, No. 2, pp. 127-133.
ISSN: 0918-6158.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 12 May 1997
Last Updated on STN: 12 May 1997

AB Human lactoferrin (LF) specifically binds to human monocytic leukemia cell line THP-1 cells differentiated into macrophages, and it has been suggested that the poly-N-acetyllactosaminyl saccharide chains of LF are involved. We partially purified and characterized LF-binding proteins with affinity for polylactosamines from THP-1 cells. LF-binding activity was solubilized by nonionic detergent Triton X-100 from THP-1 cell membrane, and subjected to affinity chromatography using an LF-Sepharose column. LF-binding activity, detected by ligand blotting assay, was eluted and further fractionated by affinity chromatography using a Sepharose column coupled with band 3, a polylactosaminyl chain-containing glycoprotein of human erythrocyte membrane. LF-binding activity was separated into three fractions (frs. B1, B2, and B3). These fractions exhibited band 3-binding activity as detected by ligand blotting assay. Dodecylsulfate-polyacrylamide gel electrophoresis of frs. B1, B2, and B3, followed by detection of LF-binding activity on Western blots, indicated that frs. B1, B2, and B3 contained LF-binding proteins with a molecular mass of 35, 50 and 80, and 35-37 kDa, respectively. Binding of LF to each of the fractions on the dot blots was partially inhibited by LF oligosaccharides, band 3 oligosaccharides and lacto-N-neotetraose, each containing di-N-acetyllactosaminyl or analogous structure, Gal beta-1 fwdarw 4G)cNAc beta-1 fwdarw 3 Gal beta-1 fwdarw 4GlcNAc (or Glc). These results suggest that the 35, 50 and/or 80, and 35-37 kDa proteins on THP-1 cells are LF-binding proteins with polylactosamine-binding ability.

L16 ANSWER 31 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:156191 BIOSIS
DOCUMENT NUMBER: PREV199799455394
TITLE: Isolation and characterization of a class II alpha-mannosidase cDNA from lepidopteran insect cells.
AUTHOR(S): Jarvis, Donald L. [Reprint author]; Bohlmeyer, Dwight A.; Liao, Yung-Feng; Lomax, Kristen K.; Merkle, Roberta K.; Weinkauf, Carla; Moremen, W.
CORPORATE SOURCE: Dep. Entomol., Texas A M Univ., College Station, TX 77843, USA
SOURCE: Glycobiology, (1997) Vol. 7, No. 1, pp. 113-127.
ISSN: 0959-6658.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Apr 1997
Last Updated on STN: 2 May 1997

AB Lepidopteran insect cells are used routinely as hosts for foreign glycoprotein expression by recombinant baculoviruses, but the precise nature of their N-glycosylation pathway remains poorly defined. These

cells clearly have processing glucosidases and mannosidases that can convert precursors to Man-3G)cNAc-2 structures and fucosyltransferases that can add fucose to the oligosaccharide core. However, their ability to extend these structures to produce complex side chains like those found in mammalian cells remains to be determined. To begin to examine this pathway at the molecular genetic level, we isolated and characterized a class 11 alpha-mannosidase (alpha-mannosidase II) cDNA from Sf9, a lepidopteran insect cell line. In mammalian cells, this enzyme catalyzes the committed step in the pathway converting N-linked carbohydrates to complex forms. Degenerate primers against conserved regions in known class II alpha-mannosidase protein sequences were used to generate an alpha-mannosidase II-specific PCR product from Sf9 cell DNA. Sequence information from this product was used to isolate a partial cDNA clone, the 5' end was isolated by ligation-anchored PCR, and the full length alpha-mannosidase II cDNA was assembled. This cDNA contained a long open reading frame predicted to encode an 1130 amino acid protein with 37% identity to human Golgi alpha-mannosidase II and with a type II membrane topology, a feature of all known Golgi processing enzymes. Southern blotting indicated that alpha-mannosidase II is a single copy gene in Sf9 cells. Other Lepidoptera had related alpha-mannosidase II genes, but there was variation among different genera, and the Sf9 alpha-mannosidase II cDNA did not cross-hybridize with DNA from animals outside Lepidoptera. Steady-state levels of a-mannosidase II RNA were low in uninfected Sf9 cells and even lower after baculovirus infection. The in vitro-translated Sf9 alpha-mannosidase II protein had the expected size and was translocated and N-glycosylated by microsomal membranes. Expression of the Sf9 alpha-mannosidase II cDNA in the baculovirus system produced large amounts of a protein with the expected size and swainsonine-sensitive alpha-mannosidase II activity towards an aryl-alpha-mannoside substrate. These results demonstrate that Sf9 cells encode and express an alpha-mannosidase II with properties similar to those of the mammalian enzyme.

L16 ANSWER 32 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:276151 BIOSIS
DOCUMENT NUMBER: PREV199698832280
TITLE: Synthesis of a hexasaccharide corresponding to a porcine zona pellucida fragment that inhibits porcine sperm-oocyte interaction in vitro.
AUTHOR(S): Spijker, Nynke M. [Reprint author]; Keuning, Cor A.; Hooglugt, Mariska; Veenenman, Gerrit H.; Van Boeckel, Constant A. A.
CORPORATE SOURCE: N.V. Organon, Scientific Development Group, P.O. Box 20, 5340 BH Oss, Netherlands
SOURCE: Tetrahedron, (1996) Vol. 52, No. 16, pp. 5945-5960. CODEN: TETRAB. ISSN: 0040-4020.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Jun 1996
Last Updated on STN: 10 Jun 1996

AB The synthesis of hexasaccharide 1, (Gal-beta(1-4)G)cNAc (6OSO-3-)beta(1-3)Gal-beta(1-4)GlcNAc-beta(13)Gal-beta(1-3)GalNAc-alpha-O(CH-2)-3NH-2), which corresponds to a porcine zona pellucida fragment that inhibits porcine sperm-oocyte interaction, is described. Compound 1 was obtained from fully protected hexasaccharide 2, which was in turn constructed from protected Gal-beta(1-3)GalNAc disaccharide 5, containing an alpha-linked 3-azidopropyl spacer, and from lactosamine derivatives 3 and 4. Disaccharide 3 and 4 were prepared by coupling of selenophenyl glycoside 6 with glycosyl acceptors containing anomeric thioethyl groups. NIS/TfOH promoted coupling of disaccharide 4 with 5 afforded 29, which was transformed into the tetrasaccharide acceptor 30 by selective removal of

the levulinoyl group. Glycosylation of 30 with 3 afforded protected hexasaccharide 2. Removal of the phthalimido groups, acetylation, followed by selective removal of the allyl group and sulphation, and finally complete deprotection afforded hexasaccharide 1.

L16 ANSWER 33 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:126512 BIOSIS
DOCUMENT NUMBER: PREV199799418325
TITLE: N-Linked sugar chain of 55-kDa royal jelly glycoprotein.
AUTHOR(S): Kimura, Yoshinobu; Kajiyama, Shin-Ichiro; Kanaeda, Jun; Izukawa, Tomomi; Yonekura, Masami [Reprint author]
CORPORATE SOURCE: Dep. Applied Biological Resour. Sci., Sch. Agric., Ibaraki Univ., Ami-machi, Ibaraki 300-03, Japan
SOURCE: Bioscience Biotechnology and Biochemistry, (1996) Vol. 60, No. 12, pp. 2099-2102.
ISSN: 0916-8451.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Mar 1997
Last Updated on STN: 25 Mar 1997
AB An N-linked sugar chain from 55-kDa royal jelly glycoprotein (RJGP), which maintains the high viability of rat liver primary cultured cell and is a different molecular species from 350-kDa RJGP (Kimura et al., Biosci. Biotech. Biochem., 59, 507-509 (1995)), has been identified. The sugar chains were released by hydrazinolysis followed by N-acetylation and pyridylamination. The structural analysis of the pyridylaminated sugar chain was done by a combination of sequential exo-mannosidase digestions, MALDI-TOF MS, and 500 MHz 1H-NMR. For the carbohydrate moiety of 55-kDa RJGP, only one N-linked sugar chain has been detected. The structure has been found to be Mana1 fwdarw 2Man-alpha-1 fwdarw 6(Man-alpha-1 fwdarw 2Man-alpha-1 fwdarw 3)Man-alpha-1 fwdarw 6(Man-alpha-1 fwdarw +2Man-alpha-1 fwdarw 2Man-alpha-1 fwdarw +3)Man-beta-1 fwdarw 4GlcNAc-beta-1 fwdarw 4G;cNAc, which is a non-processed high mannose type structure.

L16 ANSWER 34 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:284340 BIOSIS
DOCUMENT NUMBER: PREV199699006696
TITLE: Schistosoma mansoni infection in humans and primates induces cytolytic antibodies to surface Le-x determinants on myeloid cells.
AUTHOR(S): Nyame, A. Kwame; Pilcher, Joy B.; Tsang, Victor C. W.; Cummings, Richard D. [Reprint author]
CORPORATE SOURCE: Univ. Oklahoma Health Sciences Center, Dep. Biochem. Mol. Biol., PO Box 26901, BSEB-325, Oklahoma City, OK 73190, USA
SOURCE: Experimental Parasitology, (1996) Vol. 82, No. 2, pp. 191-200.
CODEN: EXPAAA. ISSN: 0014-4894.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Jun 1996
Last Updated on STN: 25 Jun 1996
AB The Lewis x antigen (Le-x; Gal-beta-1-4(Fuc-alpha-1-3)G)cNAc -beta-1-R), which is present on the surfaces of human cells, is also synthesized by the human helminthic parasite Schistosoma mansoni. We now report that IgM and IgG antibodies to Le-x antigens are present in the sera of humans and rhesus monkeys infected with S. mansoni, whereas these antibodies are completely absent in uninfected individuals. The sera from infected humans and monkeys mediate specific complement-dependent cytolysis of human promyelocytic leukemic HL-60 cells, which bear surface

Le-x antigen. Furthermore, the major cytolytic activity in sera from infected individuals toward HL-60 cells is due to anti-Le-x reactivity.

L16 ANSWER 35 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:262881 BIOSIS
DOCUMENT NUMBER: PREV199698819010
TITLE: Isolation and structural characterization of fucosylated gangliosides with linear poly-N-acetyllactosaminyl chains from human granulocytes.
AUTHOR(S): Muething, Johannes [Reprint author]; Spanbroek, Rainer; Peterkatalinic, Jasna; Hanisch, Franz-Georg; Hanski, Christoph; Hasegawa, Akira; Unland, Frank; Lehmann, Juergen; Tschesche, Harald; Egge, Heinz
CORPORATE SOURCE: Inst. Cell Culture Technology, Univ. Bielefeld, P.O. Box 100131, 33501 Beilefeld, Germany
SOURCE: Glycobiology, (1996) Vol. 6, No. 2, pp. 147-156. ISSN: 0959-6658.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 Jun 1996
Last Updated on STN: 10 Jun 1996
AB The isolation and structural characterization of fucosylated neolacto-series gangliosides with linear poly-N-acetyllactosaminyl chains from normal human granulocytes is described. Gangliosides were purified by consecutive use of anion exchange HPLC on Fractogel TMAE650(S), adsorption and reversed phase HPLC on Nucleosil 50-7 and Nucleosil 7C-18 columns, respectively. TLC immunostaining with carbohydrate specific monoclonal antibodies, fast atom bombardment-mass spectrometry (FAB-MS) of the permethylated derivatives and gas chromatography-electron impact mass spectrometry (GCEIMS) of partially methylated alditol acetates were used for structure elucidations. One ganglioside was identified as sialyl Lewis-x antigen with nLcOse-6Cer core, Neu5Ac-alpha-2-3Gal-beta-1-4(Fuc-alpha-1 - 3)G)cNAc-beta-1 - 3Ga-beta-1 - 4Glc NAc-beta-1-3Gal-beta-1-4Glc-beta-1-1Cer. Furthermore, monosialylated ceramide deca-, undeca-, dodeca- and tridecasaccharides with three (nLcOse-8Cer) and four (nLcOse-10Cer) linear lactosaminyl repeats were identified, carrying one to three fucoses. The ceramide portions were found to contain C-18 sphingosine and predominantly C-16:0 fatty acids. All monosialogangliosides were homogenous concerning their terminal alpha-2-3Neu5Ac-sialylation, but different in their fucosylation status. Beside V13Neu5Ac,V-3Fuc-nLeOse-6Cer, in two of the fucosylated polylactosaminyl ganglioside fractions the sialyl Lewis-x epitope was found, whereas five species expressed the terminal VIM-2 motif. The role of protein linked sialyl Lewis' epitope of human granulocytes as a ligand for endothelial leukocyte adhesion molecule-1 (ELAM-1; E-selectin) and platelet activation-dependent granule external membrane protein (PADGEM; P-selectin) is well documented. However, the involvement of endothelial cells E- and/or P-selectin mediated cell-cell adhesion via lipid bound sialyl Lewis-x and/or VIM-2 epitopes on human granulocytes has to be proved in further investigations.

L16 ANSWER 36 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:181865 BIOSIS
DOCUMENT NUMBER: PREV199698737994
TITLE: Molecular dynamics simulations of hybrid and complex type oligosaccharides.
AUTHOR(S): Balaji, P. V.; Qasba, P. K. [Reprint author]; Rao, V. S. R.
CORPORATE SOURCE: Lab. Mathematical Biology, National Cancer Inst., National Inst. Health, Building Park 5, Room 410, 12420 Parklawn Drive, MSC 8105, Bethesda, MD 20892-8105, USA

SOURCE: International Journal of Biological Macromolecules, (1996) Vol. 18, No. 1-2, pp. 101-114.
CODEN: IJBMDR. ISSN: 0141-8130.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 29 Apr 1996
Last Updated on STN: 29 Apr 1996

AB Conformational preferences of hybrid (GlcNAc-1Man-5GlcNAc-2) and complex (G)cNAc-1Man-3GlcNAc-2; GlcNAc-2Man-3GlcNAc-2) type asparagine-linked oligosaccharides and the corresponding bisected oligosaccharides have been studied by molecular dynamics simulations for 2.5 ns. The fluctuations of the core Man-alpha-1,3-Man fragment are restricted to a region around, (-30 degree ,-30 degree) due to a 'face-to-face' arrangement of bisecting GlcNAc and the beta-1,2-GlcNAc on the 1,3-arm. However, conformations where such a 'face-to-face' arrangement is disrupted are also accessed occasionally. The orientation of the 1,6-arm is affected not only by changes in chi, but also by changes in PHI and PSI around the core Man-alpha-1,6-Man linkage. The conformation around the core Man-alpha-1,6-Man linkage is different in the hybrid and the two complex types suggesting that the preferred values of PHI, PSI, and chi are affected by the addition or deletion of saccharides to the alpha-1,6-linked mannose. The conformational data are in agreement with the available experimental studies and also explain the branch specificity of galactosyltransferases.

L16 ANSWER 37 OF 49 MEDLINE on STN
ACCESSION NUMBER: 95238364 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7721776
TITLE: Acceptor specificity of different length constructs of human recombinant alpha 1,3/4-fucosyltransferases. Replacement of the stem region and the transmembrane domain of fucosyltransferase V by protein A results in an enzyme with GDP-fucose hydrolyzing activity.
AUTHOR: de Vries T; Srnka C A; Palcic M M; Swiedler S J; van den Eijnden D H; Macher B A
CORPORATE SOURCE: Department of Chemistry and Biochemistry, San Francisco State University, California 94132, USA.
CONTRACT NUMBER: CA32826 (NCI)
SOURCE: The Journal of biological chemistry, (1995 Apr 14) Vol. 270, No. 15, pp. 8712-22.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199505
ENTRY DATE: Entered STN: 5 Jun 1995
Last Updated on STN: 6 Mar 2003
Entered Medline: 19 May 1995

AB The acceptor specificity of recombinant full-length, membrane-bound fucosyltransferases, expressed in COS-7 cells, and soluble, protein-A chimeric forms of alpha 1,3-fucosyltransferase (Fuc-T) III, Fuc-TIV, and Fuc-TV was analyzed toward a broad panel of oligosaccharide, glycolipid, and glycoprotein substrates. Our results on the full-length enzymes confirm and extend previous studies. However, chimeric Fuc-Ts showed increased activity toward glycoproteins, whereas chimeric Fuc-TIII and Fuc-TV had a decreased activity with glycosphingolipids, compared to the full-length enzymes. Unexpectedly, chimeric Fuc-TV exhibited a GDP-fucose hydrolyzing activity. In substrates with multiple acceptor sites, the preferred site of fucosylation was identified. Fuc-TIII and Fuc-TV

catalyzed fucose transfer exclusively to OH-3 of glucose in lacto-N-neotetraose and lacto-N-tetraose, respectively, as was demonstrated by 1H NMR spectroscopy. Thin layer chromatography immunostaining revealed that FucT-IV preferred the distal GlcNAc residue in nLc6Cer, whereas Fuc-TV preferred the proximal Gl-cNAc residue. Incubation of Fuc-TIV or Fuc-TV with VI3NeuAcnLc6Cer resulted in products with the sialyl-LewisX epitope as well as the VIM-2 structure. To identify polar groups on acceptors that function in enzyme binding, deoxygenated substrate analogs were tested as acceptors. All three Fuc-Ts had an absolute requirement for a hydroxyl at C-6 of galactose in addition to the accepting hydroxyl at C-3 or C-4 of GlcNAc.

L16 ANSWER 38 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1995:267421 BIOSIS
DOCUMENT NUMBER: PREV199598281721
TITLE: Expression of blood group Lewis b determinant from Lewis a: Association of this novel alpha(1,2)-L-fucosylating activity with the Lewis type alpha(1,3/4)-L-fucosyltransferase.
AUTHOR(S): Chandrasekaran, E. V.; Jain, Rakesh K.; Rhodes, John M.; Srnka, Cheryl A.; Larsen, Robert D.; Matta, Khushi L. [Reprint author]
CORPORATE SOURCE: Dep. Gynecol. Oncol., Roswell Park Cancer Inst., Elm and Carlton St., Buffalo, NY 14263, USA
SOURCE: Biochemistry, (1995) Vol. 34, No. 14, pp. 4748-4756. CODEN: BICHAW. ISSN: 0006-2960.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Jun 1995
Last Updated on STN: 26 Jun 1995

AB Blood group H type 1 (Fuc-alpha(1,2)Gal-beta(1,3)GlcNAc-beta- fwdarw) is known as the precursor structure of the blood group determinant, Lewis b (Fuc-alpha(1,2)Gal-beta(1,3)(Fuc-alpha(1,4))GlcNAc-beta- fwdarw). Recently, a new biosynthetic route for Lewis b from Lewis a (Gal-beta(1,3)(Fuc-alpha(1,4))GlcNAc fwdarw) was identified in human gastric carcinoma cells, colon carcinoma Colo 205, and ovarian tumor. The present study demonstrates the association of this new type of alpha(1,2)-L-fucosyltransferase (FT) activity with the Lewis-type alpha(1,3/ 4)-L-FT as follows: (i) the alpha(1,4)- and novel alpha(1,2)-FT activities of Colo 205 were much less inhibited than the alpha(1,3)-FT activity by N-ethylmaleimide (K-i (mu-M) = 714.0, 119.0 and 6.5 respectively). (ii) The alpha(1,4)- and novel alpha(1,2)-FT activities emerged from a Sephacryl S-200 column in identical positions. (iii) A specific inhibitor (copolymer from 3-sulfo-Gal-beta(1,3)G)cNAc -beta-O-allyl and acrylamide) of alpha(1,4)FT activity inhibited both alpha(1,4)- and alpha(1,2)-FT activities in Sephacryl-S-200 column effluent to almost the same extent (apprx 80%); (iv) separation of the Lewis-type alpha(1,3/4)-FT from the plasma-type alpha(1,3)-FT by specific elution of the affinity column (bovine IgG glycopep-Sepharose) with lactose and further purification on a Sephacryl S-100 HR column showed that (a) the alpha(1,3)-FT activity was the inherent capacity of the Lewis-type FT (Colo 205 fraction L) since apprx 90% of both the alpha(1,4)- and alpha(1,3-FT activities is inhibited by the copolymer, (b) the unique ability of catalyzing the alpha(1,2)-L-fucosylation of Gal in Lewis a structure ana also the alpha(1,3)-L-fucosylation of Glc in lactose-based structure belonged to the Lewis-type enzyme (Colo 205 fraction L), (c) a measurement of the (14C)fucosyl products arising from the two acceptors Gal-beta(1,3)(4,6-di-O-Me)GlcNAc-beta-O-Bn and 3-sulfo-Gal-beta(1,3)GlcNAc-beta-O-Al (specific for alpha(1,2) and alpha(1,4), respectively) taken in the same incubation mixture showed mutual inhibition by the acceptors (K-m for the alpha(1,4)-specific

acceptor, 3-sulfo-Gal-beta(1,3)GlcNAac-O-Al, increased from 32 to 50 mu-M in the presence of 7.5 mM Gal-beta(1,3)(4,6-di-O-Me)GlcNAc-beta-O-Bn, whereas K-i for the mutual inhibition of alpha(1,2)-FT activity by the former was 102 mu-M), and (d) the Lewis-type FT, in contrast to the plasma-type FT, was highly effective in fucosylating complex glycopeptides. (iv) A cloned FT (FT III: Lewis type) and the Colo 205 Lewis-type FT (fraction L) showed similar activities toward various acceptors; the enzymatic product resulting from the action of cloned FT on Gal-beta(1,3)(Fuc-alpha(1,4))GlcNAc-beta-O-Bn was identified by FAB mass spectrometry as the difucosyl compound. (v) An examination of six human cell lines indicated that the novel alpha(1,2)-FT activity associates with the alpha(1,4)-FT activity.

L16 ANSWER 39 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

ACCESSION NUMBER: 1996:61297 BIOSIS
DOCUMENT NUMBER: PREV199698633432
TITLE: Peptide anchor residue glycosylation: Effect on class I major histocompatibility complex binding and cytotoxic T lymphocyte recognition.
AUTHOR(S): Haurum, John S. [Reprint author]; Tan, Linda; Arsequell, Gemma; Frodsham, Penny; Lellouch, Annemarie C.; Moss, Paul A. H.; Dwek, Raymond A.; McMichael, Andrew J.; Elliott, Tim
CORPORATE SOURCE: Molecular Immunol. Group, Inst. Molecular Med., John Radcliffe Hosp., Oxford OX3 9DU, UK
SOURCE: European Journal of Immunology, (1995) Vol. 25, No. 12, pp. 3270-3276.
CODEN: EJIMAF. ISSN: 0014-2980.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Feb 1996
Last Updated on STN: 10 Feb 1996

AB This study extends our previous observation that glycopeptides bind to class I major histocompatibility complex (MHC) molecules and elicit carbohydrate-specific CTL responses. The Sendai virus nucleoprotein wild-type (WT) peptide (FAPGNYPAL) binds H-2D-b using the P5-Asn as an anchor. The peptide K2 carrying a P5 serine substitution did not bind D-b. Surprisingly, glycosylation of the serine (K2-O-G)cNAc) with N-acetylglucosamine (GlcNAc), a novel cytosolic O-linked glycosylation, partially restored peptide binding to D-b. We argue that the N-acetyl group of GlcNAc may fulfil the hydrogen bonding requirements of the D-b pocket which normally accomodates P5-Asn. Glycosylation of the P5-Asn residue itself abrogated binding similar to K2, probably for steric reasons. The peptide K2-O-GlcNAc readily elicited D-b-restricted cytotoxic T lymphocytes (CTL), which did not cross-react with K2 or WT. However, all D-b-restricted CTL raised against K2-O-GlcNAc cross-reacted strongly with another glycopeptide, K3-O-GlcNAc, where the GlcNAc substitution is on a neighboring P4-Ser. Furthermore, D-b-restricted CTL clones raised against K2-O-GlcNAc or K3-O-GlcNAc displayed a striking TCR conservation. Our interpretation is that the carbohydrate of K2-O-GlcNAc not only mediates binding to D-b, but also interacts with the TCR in such a way as to mimic K3-O-GlcNAc. This unusual example of molecular mimicry extends the known effects of peptide glycosylation from what we and others have previously reported: glycosylation may create a T cell neo-epitope, or, conversely, abrogate recognition. Alternatively, glycosylation may block peptide binding to MHC class I and finally, as reported here, restore binding, presumably through direct interaction of the carbohydrate with the MHC molecule.

L16 ANSWER 40 OF 49 MEDLINE on STN

ACCESSION NUMBER: 94193752 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8144643

TITLE: Induction of dolichyl-saccharide intermediate biosynthesis corresponds to increased long chain cis-isoprenyltransferase activity during the mitogenic response in mouse B cells.
AUTHOR: Crick D C; Scocca J R; Rush J S; Frank D W; Krag S S; Waechter C J
CORPORATE SOURCE: Department of Biochemistry, A. B. Chandler Medical Center, University of Kentucky College of Medicine, Lexington 40536.
CONTRACT NUMBER: GM36065 (NIGMS)
GM36570 (NIGMS)
SOURCE: The Journal of biological chemistry, (1994 Apr 8) Vol. 269, No. 14, pp. 10559-65.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199405
ENTRY DATE: Entered STN: 11 May 1994
Last Updated on STN: 11 May 1994
Entered Medline: 5 May 1994

AB There are large increases in the rates of Glc3-Man9GlcNAc2-P-P-Dol (Oligo-P-P-Dol) biosynthesis and protein N-glycosylation during the proliferative response of murine B lymphocytes (B cells) to bacterial lipopolysaccharide (LPS). To learn more about the regulation of dolichyl-saccharide biosynthesis, the possible relationships between developmental changes in specific steps in dolichyl phosphate (Dol-P) and N-acetyl-glucosaminylpyrophosphoryldolichol (GlcNAc-P-P-Dol) biosynthesis and the induction of Oligo-P-P-Dol biosynthesis were investigated. These studies describe an impressive induction of long chain cis-isoprenyltransferase (cis-IPTase) activity, an enzyme system required for the chain elongation stage in de novo Dol-P synthesis, which corresponded to the striking increase in the rate of Oligo-P-P-Dol biosynthesis in LPS-activated B cells. The cellular level and specific activity of cis-IPTase increase 15-fold in LPS-treated cells with relatively unaltered affinity for isopentenyl pyrophosphate. The rates of Dol-P and Oligo-P-P-Dol synthesis increased substantially when cis-IPTase activity was induced, suggesting a regulatory relationship between the level of cis-IPTase activity and lipid intermediate synthesis. Distinctly different developmental patterns were observed for cis-IPTase and HMG-CoA reductase activity, and when sterol biosynthesis was drastically inhibited by lovastatin, the rate of synthesis of Dol-P was slightly higher in the presence of the drug. Modest elevations in the cellular levels of dolichol kinase, Dol-P phosphatase, and UDP-GlcNAc:Dol-P N-acetylglucosaminylphosphoryltransferase (L-G1PT) activities were also observed, but these changes were relatively small compared with the increases in cis-IPTase activity and the rates of Dol-P, Gl-cNAc -P-P-Dol, and Oligo-P-P-Dol synthesis. The expression of the L-G1PT gene is an early event in the developmental program for Oligo-P-P-Dol synthesis, but GlcNAc-P-P-Dol formation is apparently not rate-limiting. In summary, large increases in cis-IPTase activity and the rate of Dol-P biosynthesis appear to play a key regulatory role in the induction of Oligo-P-P-Dol biosynthesis during the proliferative response of B cells to LPS, and the biosynthetic pathways for Dol-P and cholesterol are regulated independently in dividing B cells.

L16 ANSWER 41 OF 49 EMBASE
ACCESSION NUMBER: 1989098073 EMBASE
TITLE: Novel polyfucosylated N-linked glycopeptides with blood

group A, H, X, and Y determinants from human small intestinal epithelial cells.
AUTHOR: Finne J.; Breimer M.E.; Hansson G.C.; Karlsson K.-A.; Leffler H.; Vliegenthart J.F.G.; Van Halbeek H.
CORPORATE SOURCE: Department of Medical Biochemistry, University of Turku, SF-20520 Turku, Finland
SOURCE: Journal of Biological Chemistry, (1989) Vol. 264, No. 10, pp. 5720-5735.
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical and Experimental Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 1991
Last Updated on STN: 12 Dec 1991

AB A novel type of N-linked glycopeptides representing a major part of the glycans in human small intestinal epithelial cells from blood group A and O individuals were isolated by gel filtrations and affinity chromatography on concanavalin A-Sepharose and Bandeiraea simplicifolia lectin I-Sepharose. Sugar composition, methylation analysis, (1)H NMR spectroscopy of the underivatized glycopeptides and FAB-mass spectrometry and electron impact-mass spectrometry of the permethylated glycopeptides indicated a tri- and tetra-antennary structure containing an intersecting N-acetylglucosamine and an α(1 → 6)-linked fucose residue in the core unit for the majority of the glycans. In contrast to most glycopeptides of other sources, the intestinal glycopeptides were devoid of sialic acid, but contained 6-7 residues of fucose. The outer branches contained the following structures: Fucα1-2Galβ1-3GlcNAcβ1- (H type 1); Fucα1-2Galβ1-4GlcNAcβ1- (H type 2); Galβ1-4(Fucα1-3)GlcNAcβ1- (X); Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1- (Y); GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1- (A type 1); GalNAcα1-3(Fucα1-2)Galβ14GlcNAcβ1- (monofucosyl A type 2); GalNAcα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ1- (difucosyl A type 2); GalNAcα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)G cNAc.beta.1- (trifucosyl A type 2). The blood group determinant structures were mainly of type 2, whereas glycolipids from the same cells contained mainly type 1 determinants. The polyfucosylated glycans represent a novel type of blood group active glycopeptides. The unique properties of the small intestinal glycopeptides as compared with glycopeptides of other tissue sources may be correlated with the specialized functional properties of the small intestinal epithelial cells.

L16 ANSWER 42 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 7
ACCESSION NUMBER: 1988:470924 CAPLUS
DOCUMENT NUMBER: 109:70924
TITLE: Apical sodium permeability of frog skin during serosal chloride replacement
AUTHOR(S): Leibowich, Shlomo; DeLong, Joel; Civan, Mortimer M.
CORPORATE SOURCE: Sch. Med., Univ. Pennsylvania, Philadelphia, PA, 19104-6085, USA
SOURCE: Journal of Membrane Biology (1988), 102(2), 121-30
CODEN: JMBBBO; ISSN: 0022-2631
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Gluconate substitution for serosal Cl- reduces the transepithelial short-circuit current (Isc) and depolarizes short-circuited frog skins. These effects could result either from inhibition of basolateral K+ conductance, or from 2 actions to inhibit both apical Na+ permeability (PNaap and basolateral pump activity. This question was addressed by

studying whole- and split-thickness frog skin. Intracellular Na+ concentration (
cNac) and PNaap were monitored by measuring the current-voltage relationship for apical Na+ entry. This anal. was conducted by applying trains of voltage pulses, with pulse durations of 16-32 ms. Ests. of PNaap and cNac were not detectably dependent on pulse duration over the range 16-80 ms. Serosal Cl- replacement uniformly depolarized short-circuited tissues. The depolarization was associated with inhibition of Isc across each split skin, but only occasionally across the whole-thickness prepns. This difference may reflect the better ionic exchange between the bulk medium and the extracellular fluid in contact with the basolateral membranes, following removal of the underlying dermis in the split-skin prepns. The PNaap was either unchanged or increased, and cNac either unchanged or reduced after the anionic replacement. These data are incompatible with the concept that serosal Cl- replacement inhibits PNaap and Na,K-pump activity. Gluconate substitution likely reduces cell volume, triggering inhibition of the basolateral K+ channels. The resulting depolarization reduces the elec. force favoring apical Na+ entry. The volume-conductance coupling serves to conserve volume by reducing K+ solute loss. Its mol. basis remains to be identified.

L16 ANSWER 43 OF 49 MEDLINE on STN
ACCESSION NUMBER: 84185584 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6715325
TITLE: Structures of the O-linked oligosaccharides of the major cell surface sialoglycoprotein of MAT-B1 and MAT-C1 ascites sublines of the 13762 rat mammary adenocarcinoma.
AUTHOR: Hull S R; Laine R A; Kaizu T; Rodriguez I; Carraway K L
CONTRACT NUMBER: CA 31695 (NCI)
GM 23902 (NIGMS)
SOURCE: The Journal of biological chemistry, (1984 Apr 25) Vol. 259, No. 8, pp. 4866-77.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198405
ENTRY DATE: Entered STN: 19 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 30 May 1984

AB Structures of the principal O-glycosides from the major cell surface sialoglycoprotein (ASGP-1) of the MAT-B1 and MAT-C1 ascites sublines of the 13762 rat mammary adenocarcinoma have been determined. Oligosaccharitols were released by alkaline borohydride treatments of ASGP-1 and purified by gel filtration, DEAE-Sephadex ion exchange chromatography, and high performance liquid chromatography. On the basis of carbohydrate composition, methylation analysis, periodate oxidation, and exoglycosidase digestion, the five major oligosaccharides released by mild alkaline borohydride were assigned the following structures: Component II-3: (NeuAc alpha 2----3Gal beta 1----4GlcNAc beta 1----6)Ga 1 NAcOH(3----1 betaGa 1 3----2 alpha NeuAc) III-2a: (Ga 1 beta 1----4G1cNAc beta 1----6)Ga 1 NAcOH(3----1 beta Ga 1 3----2 alpha NeuAc) III-2c: (Ga 1 alpha 1----3Ga 1 beta 1----4G1cNAc beta 1----6) Ga 1 NAcOH(3----1 beta Ga 1 3----2 alpha NeuAc) IV-1a: (Ga 1 beta 1----4G 1 cNAc beta 1----6)Ga 1 NAcOH(3----1 beta Ga 1) IV-1c: (Ga 1 alpha 1----3Ga 1 beta 1----4G 1 cNAc beta 1----6) Ga 1 NAcOH(3----1 beta Ga 1) Fucosylated derivatives of III-2a, IV-1a, and IV-1c were found in smaller amounts with the fucose tentatively assigned to the 2-position of the

lactosamine galactose. Components II-3, III-2a, and the fucosylated derivative of III-2A were found in both MAT-B1 and MAT-C1 sublines. The alpha-galactosides were found in detectable quantities only in subline MAT-B1. Oligosaccharides from MAT-C1 cells were enriched in sialic acid when compared to those from MAT-B1 cells. These results suggest that the 13762 ascites sublines, which bear different oligosaccharides, will provide models useful for the investigation of mechanisms regulating the expression of structures of the larger O-linked oligosaccharides.

L16 ANSWER 44 OF 49 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1978:229525 BIOSIS
DOCUMENT NUMBER: PREV197866042022; BA66:42022
TITLE: PURIFICATION AND CHARACTERIZATION OF LYSOZYME EC-3.2.1.17 PRODUCED BY STREPTOMYCES-ERYTHRAEUS.
AUTHOR(S): MORITA T [Reprint author]; HARA S; MATSUSHIMA Y
CORPORATE SOURCE: DEP CHEM, COLL SCI, OSAKA UNIV, TOYONAKA, OSAKA 560, JPN
SOURCE: Journal of Biochemistry (Tokyo), (1978) Vol. 83, No. 3, pp. 893-904.
CODEN: JOBIAO. ISSN: 0021-924X.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB A species of lysozyme [EC 3.2.1.17] (SE lysozyme) was purified from culture filtrate of S. erythraeus. The enzyme has a MW of 18,500 as determined by ultracentrifugation. Its isoelectric point is 9.5, and it shows optimal activity at pH 4.0 with an optimal ionic strength of 0.1. Investigation of the substrate specificity showed SE lysozyme to be an N-acetylmuramidase. The simplest product in the digest of cell walls of Micrococcus lysodeikticus was identified as a disaccharide, [G] cNAc[N-acetylglucosamine]β (1 → 4) MurNAc [N-acetylmuramic acid]]. While Staphylococcus aureus and M. lysodeikticus was lysed by this lysozyme, chitin and its derivatives were not.

L16 ANSWER 45 OF 49 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN DUPLICATE 8
ACCESSION NUMBER: 1978380845 EMBASE
TITLE: New medium for isolation of Actinomyces viscosus and Actinomyces naeslundii from dental plaque.
AUTHOR: Kornman K.S.; Loesche W.J.
CORPORATE SOURCE: Dept. Microbiol., Sch. Med., Univ. Michigan, Ann Arbor, Mich. 48109, United States
SOURCE: Journal of Clinical Microbiology, (1978) Vol. 7, No. 6, pp. 514-518.
ISSN: 0095-1137 CODEN: JCMIDW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 017 Public Health, Social Medicine and Epidemiology
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
LANGUAGE: English
AB Metronidazole (10 μg/ml) and cadmium sulfate (20 μg/ml) were added to a gelatin-based medium to select for microaerophilic Actinomyces species from dental plaque samples. The new medium (GMC), when incubated anaerobically, allowed 98% recovery of seven pure cultures of Actinomyces viscosus and 73% recovery of eight pure cultures of Actinomyces naeslundii, while suppressing 76% of the total count of other organisms in dental plaque samples. In 203 plaque samples, recoveries of A. viscosus and A. naeslundii on GMC and another selective medium for oral Actinomyces (CNAC-20) were compared. Recovery of A. viscosus was comparable on the two media. Recovery of A. naeslundii was significantly higher on GMC than CNAC-20 ($P<0.001$), and GMC allowed a more

characteristic cell morphology of both organisms. GMC medium appears to be useful for the isolation and presumptive identification of A. viscosus and A. naeslundii from dental plaque.

L16 ANSWER 46 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1980:528114 CAPLUS
DOCUMENT NUMBER: 93:128114
ORIGINAL REFERENCE NO.: 93:20373a,20376a
TITLE: Quantitative determination of partially methylated alditol acetate of amino sugar in methylation analysis
AUTHOR(S): Funakoshi, Ikuo; Yamashina, Ikuo
CORPORATE SOURCE: Fac. Pharm. Sci., Kyoto Univ., Kyoto, Japan
SOURCE: Iyo Masu Kenkyukai Koenshu (1978), 3, 117-20
CODEN: KIMKDN; ISSN: 0910-870X
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB Factors affecting the quant. determination of a partially methylated alditol acetate (PMAA) of an amino sugar by gas chromatog.- mass spectroscopy (GC-MS) were studied, using double-labeled N-acetyllactosamine (I) (Galβ1-3H → 4 G/ cNAc-14C). The methylation, hydrolysis, reduction, and acetylation of samples according to the method of K. Stellner et. al (1973) gave nearly quant. amts. of PMAA derivs. of both galactose and I. When a mixture of PMAA derivs. was injected into a GC-MS system, the peak of I-PMAA decreased with the column length and the amount of sample injected. When a large quantity of sample was injected, the peak of I-PMAA was larger than that of galactose-PMAA, indicating a different molar response factor. By making corrections based on these findings, quant. determination of amino sugars can be achieved.

L16 ANSWER 47 OF 49 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN DUPLICATE 9
ACCESSION NUMBER: 1977206686 EMBASE
TITLE: Establishment and distribution of Actinomyces viscosus and Actinomyces naeslundii in the human oral cavity.
AUTHOR: Ellen R.P.
CORPORATE SOURCE: Fac. Dent., Univ. Toronto, Canada
SOURCE: Infection and Immunity, (1976) Vol. 14, No. 5, pp. 1119-1124.
ISSN: 0019-9567 CODEN: INFIBR
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 011 Otorhinolaryngology
013 Dermatology and Venereology
004 Microbiology: Bacteriology, Mycology, Parasitology and Virology
LANGUAGE: English
AB The intraoral establishment and proportional distribution of suspected periodontal pathogens Actinomyces viscosus and Actinomyces naeslundii were studied using a recently developed differential plating medium, CNAC 20. Saliva and dental plaque samples were collected from 108 subjects ranging in age from infants to young adults; tongue and buccal mucosa samples were collected from only the adult subjects. Catalase negative A. naeslundii was isolated from 40% of the predentate infants' ad almost all other subjects' saliva samples. It predominated among CNAC 20 isolates in the saliva of subjects of all age groups, in the plaques of young children, and in the adult tongue samples. In contrast, catalase positive A. viscosus was not isolated from predentate infant samples, and its frequency of isolation increased slowly with age (>50% detection by age 7). A. viscosus was isolated in highest relative proportions from dental plaque and buccal mucosa samples. The two closely related species A. viscosus and A. naeslundii apparently differ in respect to factors determining the host age at which they colonize and their relative intraoral distribution in humans.

L16 ANSWER 48 OF 49 MEDLINE on STN
ACCESSION NUMBER: 76046500 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1184734
TITLE: Differential medium for detecting dental plaque bacteria resembling Actinomyces viscosus and Actinomyces naeslundii.
AUTHOR: Ellen R P; Balcerzak-Raczkowski I B
SOURCE: Journal of clinical microbiology, (1975 Oct) Vol. 2, No. 4, pp. 305-10.
Journal code: 7505564. ISSN: 0095-1137.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197601
ENTRY DATE: Entered STN: 13 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 26 Jan 1976

AB A medium for detecting colonies of Actinomyces viscosus and Actinomyces naeslundii in dental plaque samples was developed. The medium (CNAC-20) contains 20.0 mug of 3CdSO4-8H2O per ml of Columbia CNA agar base. Laboratory strains of A. viscosus grew on CNAC-20 in characteristic round, white, smooth, opaque colonies. Increasing the cadmium concentration impaired the growth of some A. viscosus strains. Stock strains of A. naeslundii and A. israelii grew in colonies of similar white, opaque morphology. The few strains of other gram-positive plaque bacteria that grew on CNAC-20 had colonies easily distinguished from those of A. viscosus. Most of the bacterial strains freshly isolated from Actinomyces-like colonies on CNAC-20 that had been inoculated with human dental plaque samples were found to have cultural characteristics consistent with previous descriptions of A. viscosus or A. naeslundii. CNAC-20 may facilitate investigations into the relationship of microaerophilic Actinomyces with the etiology of dental diseases.

L16 ANSWER 49 OF 49 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1948:36545 CAPLUS
DOCUMENT NUMBER: 42:36545
ORIGINAL REFERENCE NO.: 42:7772i,7773a-i,7774a-d
TITLE: Piperidine series. IV
AUTHOR(S): Anker, R. M.; Cook, A. H.
CORPORATE SOURCE: Imp. Coll. Sci. Technol., London, UK
SOURCE: Journal of the Chemical Society (1948) 806-10
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 42:36545

GI For diagram(s), see printed CA Issue.

AB cf. C.A. 40, 2833.1. The study of the possibility of preparing structures containing an aryl group maintained at an angle with respect to a piperidine ring has been continued. Me 1-hydroxycyclohexanepropiolate (3.5 g.), 2.3 g. (CH2:CMe)2, and 5 g. xylene, heated 18 hrs. at 170°, give 5,6-dimethyl-3-spirocyclohexyldihydrophthalide (I), m. 123°, absorption maximum (EtOH) at 2150 A., E11 400. NaNH2 (28 g. Na) in 700 cc. liquid NH3, treated with excess C2H2 and then with 175 g. NH(CMe2CH2)2CO (15 min.), with stirring overnight, give 80% 4-hydroxy-2,2,6,6-tetramethyl-4-ethynylpiperidine (II), m. 212°; 9 g. II and 16 g. MeI in 50 cc. dioxane, heated 90 min. at 100°, give 90% 4-hydroxy-1,2,2,6,6-pentamethyl-4-ethynylpiperidine (III), MeN(CMe2.CH2)2C(OH)C.tplbond.CH, m. 120°; the Ac derivative was characterized as the perchlorate, m. 247° (decomposition). III could not be converted into MeN(CMe2.CH2)2C(OH)C.tplbond.CCO2Me, the reaction

giving a low yield of an oil which, on heating with (CH2:CH)2, gave a low-boiling base. Et2N(CH2)3Ac (18 g.), 25 g. PhCH2CN, 5 g. MeONa, and 70 cc. EtOH, refluxed 30 min., the cooled solution diluted with 300 cc. H2O, acidified, extracted with ether, the aqueous phase made alkaline with K2CO3, and extracted with ether, give 38% 1-cyano-1-phenyl-2-methyl-2-(3-diethylaminopropyl)ethylene, b0.1 140°, n19D 1.5261; 5 g. 1-methyl-4-piperidone and 10 g. PhCH2CN similarly yield 52% 1-methyl-4-(cyanophenylmethylene)-piperidine, b0.5 150°, whose HCl salt m. 203°; these could not be converted satisfactorily into the corresponding esters by alcoholysis. CH2:NCH2CN reacts with PhCHNaCN to give presumably Ph(CN)CNaC(:NH)CH2N:CH2, but attempts to isolate any related keto nitrile were unsuccessful. The reaction of PhCHNaCN with MeCH:CHCOCl was also not promising. PhCHNa(CN) could not be condensed with HOCH2CH2Cl or HOCH2CH2Br; C6H4(CO)2N(CH2)3Br did not react in the expected manner and O.CH2.CHCH2Cl gave only tarry products. PhCHNaCN (24 g. Na and 60 g. PhCH2CN) in liquid NH3, treated dropwise with 45 g. (CH2)2O in 250 cc. ether, the mixture stirred 40 hrs., and neutralized with 60 g. NH4Cl, give 20% HOCH2CH2CHPhCN (IV) and 58% 2-imino-3-(2-hydroxyethyl)-3-phenyltetrahydrofuran (V), m. 130°. V (10 g.) in 55 cc. N HCl at 0°, slowly treated with 3.5 g. NaNO2 in H2O, gives 9.7 g. α-phenyl-α-2-hydroxyethyl-γ-butyrolactone, m. 77°; it results also on keeping an acid solution of V overnight (cf. Bergel, C.A. 38, 5831.2). V (37.5 g.), boiled gently 1 hr. with 36 cc. 48% HBr and 15 cc. concentrated H2SO4, gives 94% α-phenyl-α-(2-bromoethyl)-γ-butyrolactone (VI), b0.02 140°; 25 g. VI and 7.5 g. Me2NH in 60 cc. ether, kept 24 hrs. at room temperature and 7 hrs. at 50°, give 95% α-phenyl - α - (2 - dimethylaminoethyl) - γ - butyrolactone (VII), b0.1 140°, b20 215° (HCl salt, m. 193°). MeMgI (6.5 g. Mg and 36 g. MeI) in 160 cc. ether, treated dropwise with 10.3 g. VII in 30 cc. ether and the mixture refluxed 20 hrs., gives an unknown compound whose HCl salt, C15H23ONCl2, m. 174°. HOCH2CH2Cl (320 g.), 65 g. (HCHO)3, and 55 g. anhydrous CaCl2, treated at 0° 2 hrs. with a rapid stream of HCl and the mixture kept 2 days at 0°, give 84% (ClCH2CH2O)2CH2 (VIII), b14 105°. PhCHNaCN (from 600 g. PhCH2CN and 190 g. NaNH2) in PhMe, treated at 40° with 410 g. VIII and the mixture refluxed 60-90 min., gives 65% bis(3-cyano-3-phenylpropoxy)methane (IX), (NCCHPhCH2CH2O)2CH2, b0.001 115° (difficult to purify); 53 g. IX, 60 cc. EtOH, 200 cc. H2O, and 40 cc. concentrated HCl, heated 30 min. at 85°, give 75% IV; IV and SOCl2 in PhNMe2 (30 min. at 80°) give 65% ClCH2CH2CHPhCN (X), b14 160-80°. X (18 g.), 17 g. piperidine, and 30 cc. dioxane, heated 6 hrs. at 100°, yield 60% α-[2-(1-piperidyl)-ethyl]benzyl cyanide (XI), b0.1 150° (picrate, m. 161°); α-[2-(4-morpholinyl)ethyl]benzyl cyanide, b0.05 140°, n23D 1.5280, 60%. XI (12.5 g.), 11 g. concentrated H2SO4, and 30 cc. EtOH, heated 5 hrs. at 135°, give 68% Et γ-1-piperidyl-α-phenylbutyrate, b0.05 115°, n20D 1.5162 (HCl salt, m. 176°); γ-dimethylamino analog, b1.5 100°, n29D 1.5010; γ-4-morpholinyl analog, b1.5 135°, n17D 1.5190, n31.5D 1.5207 (HCl salt, m. 169°). HO(CH2)4Cl (prepared from 200 g. tetrahydrofuran and HCl), treated at 0° with 35 g. (HCHO)3 and a rapid stream of HCl (1 hr.) and, after addition of 50 g. anhydrous CaCl2, kept 5 days at room temperature, gives 47% bis(4-chlorobutoxy)methane (XII), b0.01 100°; 197 g. XII and PhCHNaCN (310 g. PhCH2CN) give 120 g. bis(5-phenyl-5-cyanoamoxy) methane, b0.002 125°, n18D 1.5268; hydrolysis yields 80% α-4-hydroxybutylbenzyl cyanide, b0.2 160° (1-naphthylurethan, m. 96°); α-4-chlorobutylbenzyl cyanide (XIII), b0.1 125°, n21D 1.5276, 78%. XIII (14 g.), 12 g. 33% MeNH2 in EtOH, and 80 cc. ether, heated 16 hrs. at 100°, give 73% α-(4-methylaminobutyl)benzyl cyanide, b0.5

125°, n30D 1.5117; α-(4-dimethylamino) analog, b0.5
110°, n24D 1.5053, 80%; α-[4-(4-morpholinyl)] analog, b0.5
190°, n25D 1.5210 (picrate, m. 123°). Et
6-dimethylamino-2-phenylhexanoate, b1.5 115°, n23D 1.4945;
6-(4-morpholinyl) analog, b0.2 145°, n27D 1.5128 (HCl salt, m.
133-5°). Most of the above nitriles and esters had only a low
degree of activity as analgesics, although the morpholinyl esters were
about 33% as active as pethidine [Ph(CO2Et)C(CH2.CH2)2NMe].

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